

## Curriculum Vitae

### AHMED MONEEB ELSABBAGH, Prof. Dr.\_Ing., Ph.D.

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Ain Shams university, Faculty of Engineering  
Design & Production Engineering Department  
Elsaray St., 1, 11535, Abbasiya, Cairo, Egypt

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#### PROFILE

- Materials scientist with specialization in polymer composite materials and aluminum composites
- Licensed as material inspector for water and sanitary pipelines projects
- Profound knowledge in developing natural fiber polymer composites
- Experience in thermo-mechanical processing, thermal and rheological analysis of polymers
- Sound knowledge in metal casting, non-destructive testing, polymer processing
- Licensed as LEVEL II in ASNT as inspector for non-destructive testing
- Licensed as university and high school educator with ZHD certificate in Germany- 2017
- Very good command of Arabic, English and German

#### CAREER DEVELOPMENT

- 03.2018 – present: **Department head** of Design and production engineering department, Ain Shams university
- 07.2017 – present: **Unit head** of material engineering program- Credit hour, Ain Shams university
- 01.2017 – present : **Supervisor** of the mechanical testing laboratory, Ain Shams university
- 08.2016 – 06.2017 : **Professor** of material engineering- Design & production Dept.- Ain Shams
- 12.2006 – 11.2016: **Scientific Co-worker** at Institute of Polymer Materials and Plastics Engineering – Clausthal University of Technology, Germany
- 05.2004 – 11.2006: **Lecturer** at Faculty of Engineering – Ain Shams University – Egypt
- 03.1996-04.2004: Teaching assistant at Faculty of Engineering – Ain Shams University – Egypt

#### EDUCATION

- 01.2017: **Second Doctor Title** in fiber polymer composites **TU Clausthal, Germany**
- 04.2004: **Doctor of Philosophy** in simulation of Aluminum Castings, **Ain Shams University, Egypt**
- 05.1999: **Master of Science** in Casting/Rolling of metal matrix composites, **Ain Shams, Egypt**
- 07.1994: **Bachelor of Science** in mechanical design and production engineering, **Ain Shams, Egypt**

#### PROFESSIONAL EXPERIENCE

- **Supervision of industrial projects:** Principal investigator of **ZIM**-project with BADA AG Germany (2013-2014) and project member of **FORD** project financed by Fachagentur Nachwachsende Rohstoffe – **FNR** (2012-2014)
- **Supervision of academic projects:** Principal investigator of 5 **DAAD** Germany financed projects within 2009-2016, project member of **DFG** projects, Germany (2010-2011) and expert in **JESOR** funded project, Egypt
- **Construction and supervision of mechanical testing laboratory** in Ain Shams University: Execution of industrial contracts for Egyptian governmental and non-governmental organizations. (1997-2006) and (2017-present)
- **Inspector** for the National Authority For Potable Water and Sewage, Egypt in 1996-2006
- **Senior Inspector at CANSPECT** Canadian Corporation for inspection and consultancy – Cairo branch within 1.2001 – 11.2006 and in Germany as freelancer inspector in 2007-2010
- **Member in Ministerial** committee for water flowmeters selection on national level in 2005-2006
- **Production line engineer** for aluminum extrusion plant in Arab Aluminum Co.- Ismailia, in 1994

#### OTHER INFORMATION: GRANTS, AWARDS & COMMUNITIES

- ICNF prize in the international conference of natural fibre, Azoren-Portugal 2015
- State prize in innovation for young scientists – Egypt 2010
- Ain Shams scientific prize – Egypt 2011



+20 226824445



+20 1005280270



elsabbagh.ahmed@eng.asu.edu.eg

- DAAD fellowship for young scientists for three months in RWTH Aachen, 2006
- Member in the society for the Advancement of Material and Process Engineering (SAMPE)

#### NATIONAL ASSIGNMENTS

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|--------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>2005 – 2006</b> | a member in prequalification committees for bidders in the National organization for potable water and sanitary drainage |
| <b>2018-2019</b>   | A member of the national committee of setting the bylaws for four new universities                                       |
| <b>2018-2019</b>   | A member of the national committee for the engineering institutes                                                        |

#### PROJECTS LIST

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|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2009-2010</b>        | <b>Functionality of Environmentally Friendly Hybrid Composites</b> 50016808<br>– DAAD, Germany                                                                                                                                                                                                 |
| <b>2007-2011</b>        | <b>Natural Fibres – New alternatives for the Determination of Defined Properties for Synthetic Composites</b><br>22024605 - 05NR246 – Fachagentur für Nachwachsende Rohstoffe, Germany                                                                                                         |
| <b>2011-2012</b>        | <b>High Added Value Natural Fibre Epoxy Composites</b><br>51241598 – DAAD, Germany                                                                                                                                                                                                             |
| <b>2012-2014</b>        | <b>Material and flow models for natural fiber reinforced injection molding materials for practical applications in the automotive industry; Subproject 4: Investigations of NF compounds and test specimens (NFC Simulation)</b><br>22005511 – Fachagentur für Nachwachsende Rohstoffe Germany |
| <b>2013-2014</b>        | <b>Natural Fibre Reinforced Engineering Plastics with Flame Retardant Properties</b><br>2056509SL2 – ZIM – Bundesministerium für Wirtschaft und Energie Aufgrund eines Beschlusses des deutschen Bundestages Germany                                                                           |
| <b>2013-2014</b>        | <b>Preparation/ Application of Bioelastomer Cellulosic Fiber Composites</b><br>57035643 – DAAD Germany                                                                                                                                                                                         |
| <b>2015</b>             | <b>Hytensile for Hybrid Structures : Development of High Performance Metal-Plastic Hybrid Composite</b><br>EFB – 8112 N FSt. 2 – Germany                                                                                                                                                       |
| <b>2015 (running)</b>   | <b>Extension Project: Preparation/ Application of Bioelastomer Cellulosic Fiber Composites</b>                                                                                                                                                                                                 |
| <b>2016 (submitted)</b> | 57170239 – DAAD Germany                                                                                                                                                                                                                                                                        |
| <b>2018 (submitted)</b> | <b>New technique for manufacturing and forming hybrid sheets of Metal/ Reinforced thermoplastics (STDF)</b><br><b>Production and Certification of Rubber Parts for Home Appliances (STDF)</b>                                                                                                  |
| <b>2008-2011</b>        | <b>Investigation of the rolling behavior of cast, particle-reinforced metal matrix composites</b><br>PA 837/17-1 – DFG Germany                                                                                                                                                                 |
| <b>2015 -2016</b>       | <b>Development of processing methods for advanced Al-SiCp strips and characterization for lightweight construction in transportation applications</b><br>5128 – GERF Germany                                                                                                                   |

#### Edited Books



+20 226824445



+20 1005280270



elsabbagh.ahmed@eng.asu.edu.eg

1. "Trends in Composite Materials and their Design", Mohamed A. Taha, Ahmed M. El-Sabbagh and Iman M. Taha, Trans Tech Publications, Switzerland, Key Engineering Materials, Volume 425, 2010, ISBN 0-87849-301-8 / 978-0-87849-301-2
2. "FLAX AND HEMP FIBRES: A NATURAL SOLUTION FOR THE COMPOSITE INDUSTRY" by the CELC European scientific committee. Chapter 6: Production techniques for natural fibre polymer composites – Gerhard Ziegmann & Ahmed Elsabbagh, 2012, ISBN 2952627614, 9782952627610
3. "Towards the Flow Pattern Simulation of Cellulosic Fiber Thermoplastic Composites during Injection Molding: Material Characterization", Ahmed El-Sabbagh, Amna Ramzy, Leif Steuernagel, Dieter Meiners and Gerhard Ziegmann, Chapter 7 in "Cellulose and Cellulose Derivatives: Synthesis, Modification, Nanostructure and Applications" edited by Ibrahim Y. Mondal, Nova Science Publishers, Inc., New York, USA, 2015 ISBN: 978-1-63483-553-4

### Peer Reviewed Publications

1. "Behavior of Stir-Cast-Al-Alloy Particulate Reinforced Metal-Matrix Composites Under Successive Hot Rolling", Mohammed A. Taha, Nahed A. El-Mahallawy, A. Moneeb El-Sabbagh, Advanced Engineering Materials, 2003, 5, No. 11, p.805-p.812,
2. "The Role of Fluid Flow in Modeling Solidification Simulation of Aluminium Plates", Mohammed A. Taha, Nahed A. El-Mahallawy, A. M. El-Sabbagh, Scientific Bulletin of Ain Shams University- Faculty of Engineering, Vol. 38, No. 4, December 31, 2003, p.849-p.865,
3. "An Experimental Study of Electron Beam Welding Feasibility of Al/Al<sub>2</sub>O<sub>3</sub> Composite", Ahmed M. El-Sabbagh, Scientific Bulletin of Ain Shams University- Faculty of Engineering, June 30, 2006,
4. "Modeling of Transient Thermal Contact Resistance out of Conjugate Gradient Method", A. M. El-Sabbagh, C. Fieberg, E. El-Magd, R. Kneern, Mat.-wiss. u. Werkstofftech. 2007, 38, No.4. 288-293,
5. "On Secondary Phase Precipitations and their Effect on Mechanical Properties in 30% Super Duplex Stainless Steel Welding Alloy", F. El-Sabbagh, A. El-Sabbagh, M. Taha, N. El-Mahallawy, and V. Neubert, STEEL GRIPS 5 (2007) No. 6, p. 446/451
6. "Some Experimental Data on Workability of Aluminium - Particulate Reinforced Metal Matrix Composites", Mohamed A. Taha, Nahed A. El-Mahallawy and Ahmed M. El-Sabbagh, Journal of Materials Processing Technology 202 (2008), issue 1-3, 380–385
7. "Improvement of Fibre-Matrix-Adhesion of Natural Fibres by Chemical Treatment", Stefan Reich, Ahmed ElSabbagh, Leif Steuernagel, Macromol. Symp. 2008, 262, 170–181
8. "Modelling of strength and stiffness behaviour of natural fiber reinforced polypropylene composites", I. Taha, A. El-Sabbagh and G. Ziegmann, Polymers & Polymer Composites, Vol. 16, No. 5, 2008, 295-302
9. "Processing and modelling of the mechanical behavior of natural fiber thermoplastic composite: Flax/Polypropylene", A. Elsabbagh, L. Steuernagel and G. Ziegmann, Polymer Composites, Vol 30, Issue 4, April 2009, 510-519
10. "Properties and performances of various hybrid glass/natural fibre composites for curved pipes", G. Cicala, G. Cristaldi, G. Recca, G. Ziegmann, A. ElSabbagh, M. Dickert, Materials and Design (2009) Vol 30, Issue 7, 2538-2542
11. "Effect of fibre/matrix chemical modification on the mechanical properties & water absorption of extruded flax/polypropylene composite", A. Elsabbagh, L. Steuernagel and G. Ziegmann, Journal of Applied Polymer Science, Volume 111, 2009,p 2279-2289
12. "Coupled Heat and Fluid Flow Model and Experimental Verification of Aluminium Plate Die Casting", Mohammed A. Taha, Nahed A. El-Mahallawy, Ahmed M. El-Sabbagh, Materials Science and Technology, Volume 25, Number 5, May 2009, pp. 670-679
13. "Prediction of Hypoeutectic Gray Iron Microstructure during Solidification and Solid Transformation Using Simple Fourier Model", Mohamed A. Taha<sup>1</sup>, Nahed A. El-Mahallawy, Ahmed. M. El-Sabbagh, Talat El-Benawy and Hasan F. Hadla, Key Engineering Materials Vol. 457 (2011) pp 293-298



14. "Hot Rolling Behaviour of Stir-Cast Al 6061 and Al 6082 Alloys - SiC Fine Particulates Reinforced Composites", A. El-Sabbagh, M. Soliman, M. Taha, H. Palkowski, *Journal of Materials Processing Technology* 212 (2012) 497– 508
15. "Characterisation of flax polypropylene composites using ultrasonic longitudinal sound wave technique", A. El-Sabbagh, L. Steuernagel and G. Ziegmann, *Composites: Part B* (2012), Volume 45, issue 1 p. 1164-1172.
16. "Ultrasonic testing of natural fibre polymer composites: effect of fibre content, humidity, stress on sound speed and comparison to glass fibre polymer composites" A. El-Sabbagh, L. Steuernagel and G. Ziegmann, *Polym. Bull.*, vol. 70 issue 2 February 2013. p. 371 - 390
17. "Description of draping behaviour of woven fabrics over single curvatures by image processing and simulation techniques", Y. Abdin, I. Taha, A. El-Sabbagh, S. Ebeid, *Composites: Part B* (2012), <http://dx.doi.org/10.1016/j.compositesb.2012.06.004>
18. "Improving the impact strength properties of natural fibre thermoplastic composites", A. El-Sabbagh, L. Steuernagel, G. Ziegmann, *Journal of Biobased Materials and Bioenergy* 2012, Vol. 6, No. 4, 346-354
19. "Hot Deformation Behaviour of 6061 and 7108 Al - SiCp Composites", M. Soliman, A. El-Sabbagh, M. Taha, H. Palkowski, *Journal of Materials Engineering and Performance* , May 2013, Volume 22, Issue 5, pp 1331-1340
20. "Low combustible polypropylene/ flax/ magnesium hydroxide composites: mechanical, flame retardation characterization and recycling effect", A. El-Sabbagh, L. Steuernagel and G. Ziegmann, *Journal of Reinforced Plastics and Composites*, Volume 32 Issue 14 July 2013, 1030-1043.
21. "Characterisation of the Draping Behaviour of Jute Woven Fabrics for Applications of Natural fibre Epoxy Composites", A. El-Sabbagh, I. Taha, *Journal of Applied Polymer Science*, Volume 130, Issue 3, November 2013, 1453–1465
22. "Effect of rolling and heat treatment on tensile behaviour of wrought Al-SiCp composites prepared by stir-casting", A. El-Sabbagh, M. Soliman, M. Taha, H. Palkowski, *Journal of Materials Processing Technology* 213 (2013) 1669– 1681
23. "Rheology of Natural Fibres Thermoplastic Compounds: Flow Length and Fibre Distribution", A. Ramzy, A. El-Sabbagh, L. Steuernagel, G. Ziegmann, D. Meiners, DOI#39861 from *Journal of Applied Polymer Science*, Volume 131, Issue 3, February 5, 2014
24. "Effect of Coupling Agent on Natural Fibre in Natural Fibre/ Polypropylene Composites on Mechanical and Thermal Behaviour", A. El-Sabbagh, *Composites: Part B* 57 (2014) 126–135
25. "Rolling of cast Al-SiCp particulate metal matrix composites and strip mechanical properties" M. A. Taha, A.M. El-Sabbagh, M. Soliman, H. Palkowski, *Mat.-wiss. u.Werkstofftech.* 2013, 44, No. 11 DOI 10.1002/mawe.201300121 1
26. "Effect of Extruder Elements on Fibre dimensions and Mechanical Properties of Bast Natural Fibre Polypropylene Composites", A. El-Sabbagh, L. Steuernagel, G. Ziegmann, D. Meiners, *Journal of Applied Polymer Science*, DOI: 10.1002/app.40435, Volume 131, Issue 12, June 15, 2014
27. "Processing Parameters and Characterisation of Flax Fibre Reinforced Engineering Plastic Composites with Flame Retardant Fillers" Ahmed El-Sabbagh, Leif Steuernagel, Gerhard Ziegmann, Dieter Meiners and Oliver Toepfer, 2014, *Composites Part B*, 62, 2014 12–18
28. "Characterisation of Natural Fibre Thermoplastic Composites using Ultrasonic Longitudinal Sound Wave", Ahmed M. El-Sabbagh, Vol.19 No.04 - *The e-Journal of Nondestructive Testing* – ID 15503, ISSN 1435-4934, Issue "2014-04"
29. M. L. Tawfic & A. M. El-Sabbagh & G. Ziegmann, "Novel coupling agent between expanded polystyrene waste and natural fabrics", *Int J Plast Technol*, 2014, Volume 18, Issue 2, pp 321–332
30. "Optimization of flame retardant content with respect to mechanical properties of natural fiber polymer composites: Case study of Polypropylene / Flax / Aluminium trihydroxide", A. El-Sabbagh, L. Steuernagel, D. Meiners, G. Ziegmann, O. Toepfer, *Polymer Composites*, 2016, Volume 37, Issue 11, 3310–3325
31. "Processing parameters and characterisation of flax fibre reinforced engineering plastic composites with flame retardant fillers", A. El-Sabbagh, L. Steuernagel , G. Ziegmann, D. Meiners, O. Toepfer, *Fortschrittsberichte der Materialforschung und Werkstofftechnik / Bulletin of Materials Research and Engineering*, ISSN 2364-0804, Shaker Verlag mit der ISBN 978-3-8440-3403-5



32. "Hyperthermia properties of magnetic polyethylenimine core/shell nanoparticles: influence of carrier and magnetic field strength", Mohamed S. A. Darwish, Ahmed El-Sabbagh, Ivan Stibor, J Polym Res (2015) 22:239, DOI 10.1007/s10965-015-0882-4
33. "Analysis of super duplex stainless steel properties as an Austenite-Ferrite composite", Materials Sciences and Applications, Fady M. Elsabbagh, Ahmed El-Sabbagh, Rawia M. Hamouda, Mohamed A. Taha, 2015, 6, 6, 1121-1136
34. "Optimizing the flame retardant content of nature fiber thermoplastic composites", Ahmed El-Sabbagh, Leif Steuernagel, Dieter Meiners, Gerhard Ziegmann, and Oliver Toepfer, SPE Plastics Research Online, doi:10.2417/spepro.006007
35. "Thermal Characterization of a Series of Lignin-based Polypropylene Blends", Journal of Thermal Analysis and Calorimetry, Ignazio Blanco, Gianluca Cicala, Alberta Latteri, Giuseppe Saccullo, Ahmed El-Sabbagh and Gerhard Ziegmann, 2016, DOI: 10.1007/s10973-016-5596-2
36. "Natural Fibre/PA6 composites with flame retardance properties: Extrusion and Characterisation", A. El-Sabbagh, L. Steuernagel, J. Ring, Composites Part B 108 (2017) 325-333,
37. "Flowability and fiber content homogeneity of natural fiber polypropylene composites in injection molding", Ahmed El-Sabbagh, Amna Ramzy, Leif Steuernagel, and Dieter Meiners, AIP Conference Proceedings 1779, 060010 (2016); doi: 10.1063/1.4965531
38. "Development of natural fiber/engineering plastics composites with flame retardance properties", Ahmed El-Sabbagh, Leif Steuernagel, Jochen Ring, and Oliver Toepfer, AIP Conference Proceedings 1779, 030020 (2016); doi: 10.1063/1.4965490
39. "Green composites based on blending of Polypropylene with "liquid wood"", Gianluca Cicala, Claudio Tosto, Alberta Latteri, Angela Daniela La Rosa, Ignazio Blanco \*, Ahmed El-sabbagh, Pietro Russo, Gerhard Ziegmann, *Materials* 2017, 10(9), 998; doi:10.3390/ma10090998
40. "Towards selection chart of flame retardants for natural fibre reinforced polypropylene Composites", A. Elsabbagh, T. Attia, A. Ramzy, L. Steuernagel, G. Ziegmann, Composites part B, Volume 141, 15 May 2018, Pages 1-8
41. "Models of flow behaviour and fibre distribution of injected moulded polypropylene reinforced with natural fibre composites", A. Elsabbagh, A. Ramzy, L. Steuernagel, G. Ziegmann, Journal: *Composites Part B*, accepted 28 October 2018

## Projects

### Projects in field of development of polymers and composite materials:

(Institut für Polymerwerkstoffe und Kunststofftechnik, TU Clausthal)

|           |                                                                                                                                                                                                            |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2007-2011 | Natural Fibres – New alternatives for the Determination of Defined Properties for Synthetic Composites<br>Granted by: Fachagentur für Nachwachsende Rohstoffe Deutschland                                  |
| 2009-2010 | Functionality of Environmentally Friendly Hybrid Composites.<br>Granted by: DAAD Germany                                                                                                                   |
| 2011-2012 | High Added Value Natural Fibre Epoxy Composites<br>Granted by: DAAD Germany                                                                                                                                |
| 2012-2014 | Natural Fibre Composites Simulation<br>Granted by: Fachagentur für Nachwachsende Rohstoffe Deutschland                                                                                                     |
| 2013-2014 | Natural Fibre Reinforced Engineering Plastics with Flame Retardant Properties<br>Granted by: BMWI - Bundesministerium für Wirtschaft und Energie, Zentrales Innovationsprogramm Mittelstand – ZIM, Germany |



+20 226824445



+20 1005280270



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- 2013-2014 Preparation/ Application of Bioelastomer Cellulosic Fiber Composites  
(Herstellung und Einsatz der Bioelastomer-Zellulose-  
Faserverbundwerkstoffe)  
Granted by: DAAD Germany
- 2015 Hytensile for Hybrid Structures : Development of High Performance Metal-  
Plastic Hybrid Composite  
Granted by: EFB: 18112 N, Germany
- 2015 Extension Project: Preparation/ Application of Bioelastomer Cellulosic Fiber  
Composites  
Granted by : DAAD- Germany
- 2015 -2016 Development of Processing Routes for Advanced Al-SiCp Strip and  
Characterization for Light Weight Construction in Transportation  
Applications  
Granted by: GERF Germany
- 2016-2018 Novel Degradable Thermoplastic Materials for Medical Disposable  
Industries  
Granted by Gsoor Egypt

#### **Projects in field of metallurgy (honorary)**

- 2008-2011 Investigation of Rolling Behaviour for Cast Particulate Metal Matrix  
Composites
- 2014-2017 (At the Faculty of Engineering, Ain Shams University, Egypt in cooperation  
with the Institute of Metallurgy, TU Clausthal, Germany)

#### **Invited speaker in Conferences**

“Fiber size- Processing- Mechanical properties map of natural fiber reinforced thermoplastics”,  
5th Central and Eastern European Conference on Thermal  
Analysis and Calorimetry (CEEC-TAC5) and 14th Mediterranean Conference  
on Calorimetry and Thermal Analysis (Medicta2019),  
CEEC-TAC5 & Medicta2019. 27 - 30 August 2019

#### **Peer Reviewed Publications in Conferences**



+20 226824445



+20 1005280270



elsabbagh.ahmed@eng.asu.edu.eg

1. "On the Microstructure and Mechanical Properties of Stir-Cast Particulate-Reinforced Aluminum -Matrix Composites" Mohamed A. Taha, Nahed A. El-Mahallawy, Ahmed M. El-Sabbagh, p.901, ICCE/8 August 5-11, 2001 in Tenerife, Spain,
2. "Workability (Up-Set Test) of Aluminium Matrix-SiC and Al<sub>2</sub>O<sub>3</sub> Particulate Reinforced Composites Prepared by Casting and Powder Metallurgy" Mohamed Taha, Nahed A. El-Mahallawy, Ahmed Moneeb El-Sabbagh, M. Abdel-Hamid, M-F. Salah and H. Palkowski, ICCE/12 July 16 , 2005 in Tenerife, Spain,
3. "Workability of aluminium particulate reinforced metal matrix composites" Mohamed Taha, Nahed A. El-Mahallawy, Ahmed Moneeb El-Sabbagh, M. Abdel-Hamid, M-F. Salah and H. Palkowski, APPA 2005 December 5-7, 2005 in Manama, Bahrain,
4. I. Taha, A. El-Sabbagh, G. Ziegmann, „Modelling of Strength and Stiffness Behaviour of Natural Fibre Reinforced Polypropylene Composites”, SAMPE, Paris, March 2008
5. G.Cicala, G.Cristaldi, G.Recca, G.Ziegmann, A.Elsabbagh, M.Dickert, "An Hybrid Glass/hemp Fibers Solution Frp Pipes: Technical and Economic Advantages of Hand Lay up VS Light Rtm", IV International Conference Times of Polymers (TOP) and Composites. AIP Conference Proceedings, Volume 1042, pp. 263-265 (2008).
6. G.Cicala, G.Cristaldi, G.Recca, G.Ziegmann, A.Elsabbagh, M.Dickert, (2008) "Studio sulla sostituzione di fibre di vetro naturali in tubi plastici fibro-rinforzati: vantaggi tecnici e economici" Atti del 9° Convegno Nazionale AIMAT, Piano di Sorrento 29Giugno-2Luglio 2008, p.193.
7. A. El-Sabbagh, "The Effect of Magnesium Hydroxide on Polypropylene/Flax Composites Flammability and Mechanical Behaviour", NRC 2009, Jan 4-6, Cairo
8. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, "Mechanical Properties versus Flammability of New/Recycled Polypropylene/Flax Composites/Magnesium Hydroxide", SAMPE 2009, March 23-25,Paris
9. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, "Non Destructive Testing of Polypropylene/Flax Composites", SAMPE 2009, March 23-25,Paris
10. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, „Copolymer optimisation for natural fibre thermoplastic composites", SAMPE Symposium 2010, Clausthal, 24. - 25. Feb 2010
11. A. El-Sabbagh, „Effect of Twin Screw Extruder Layout on Natural fibre Polymer Composites", PEDD8, 9-11 March, Cairo 2010
12. A. El-Sabbagh, „Flammability of Natural fibre Polymer Composites", PEDD8, 9-11 March, Cairo 2010
13. "Prediction of Hypoeutectic Gray Iron Microstructure during Solidification and Solid Transformation Using Simple Fourier Model", Mohamed A. Taha1, Nahed A. El-Mahallawy, Ahmed. M. El-Sabbagh, Talat El-Benawy and Hasan F. Hadla, Ninth international symposium on Science and Processing of Cast Iron, Luxor Egypt, 10-13 November, 2010
14. "Material Characterization for Reactive processing of natural fiber reinforced poly (butylene terephthalate) composites", Wangqing Wu, Ahmed EISabbagh, Gerhard Ziegmann, Bingyan Jiang, 5th edition of international workshop on thermoplastic matrix composites THEPLAC 2011, 23-24 June 2011 Lecce, Italy
15. "Improving the impact strength properties of natural fibre thermoplastic composites", A. El-Sabbagh, L. Steuernagel, G. Ziegmann, 3rd International Conference on Innovative Natural Fibre Composites for Industrial Applications, October 12-14, 2011, University of Rome "La Sapienza", Faculty of Engineering, Rome, Italy
16. "Experimental Investigation on Rolled Stir Cast Composites of Aluminium 6061 and 6082 Alloys with Silicon Carbide Particulates", Ahmed M. El-Sabbagh, Mohamed A. Taha,



- Heinz Palkowski, Processing, Performance and Failure Analysis of Engineering Materials, November 14-17, 2011, Luxor, Egypt
17. "Flame Retardants for Natural Fibre Polymer Composites", A. El-Sabbagh, L. Steuernagel, G. Ziegmann, The Twentieth Annual International Conference on Composites/ Nano Engineering, ICCE-20 Beijing, China, July 22-28, 2012
  18. "Notes on Thermal analysis and Blowholes in Natural Fibre Thermoplastic Composites", A. El-Sabbagh, A. Ramzy, L. Steuernagel, G. Ziegmann, V. Siozios, S. Passerini, M. Winter, The Twentieth Annual International Conference on Composites/ Nano Engineering, ICCE-20 Beijing, China, July 22-28, 2012
  19. "Characterisation of Natural Fibre Thermoplastic Composites using Ultrasonic Longitudinal Sound Wave" A. El-Sabbagh, The 13th International Symposium on Nondestructive Characterization of Materials<sup>TM</sup> ISNDCM-XIII Le Mans, May, 22.05.2013
  20. "Effect of Twin Screw Extruder Elements on Bast Natural Fibre Polypropylene Composites: Characterisation of Mechanical Properties and Fibre Dimensions", A. El-Sabbagh, L. Steuernagel, D. Meiners, Composites week, Leuven, Belgium, September, 16-20 September, 2013
  21. "Flax Fibre Reinforced Engineering Plastic Composites with Flame Retardant Fillers: Processing Parameters and Characterisation", Ahmed El-Sabbagh, Leif Steuernagel and Dieter Meiners, 4th Conference on Natural Fibre Composites, Rome 17-18 October 2013
  22. "Notes on Mechanical Elements in Processing Natural fibre Thermoplastic Composites: Extrusion", Ahmed El-Sabbagh, Amna Ramzy, Leif Steuernagel, International Conference on Resource Efficiency in Interorganizational Networks, Goettingen, Germany 13-14 November, 2013 ISBN: 978-3-86395-142-9
  23. "Notes on characterization of natural fiber polypropylene composites", Ahmed El-Sabbagh, Amna Ramzy, Leif Steuernagel, Stefan Kirchberg, Dieter Meiners and Gerhard Ziegmann, SPE ANTEC<sup>®</sup> 2014, Las Vegas, USA, 373-377
  24. "Eco-Composites Based On Thermoset And Thermoplastic Bio-Matrices Reinforced With Natural Fibres", Alberta LATTERI, Gianluca Cicala, A.D. LaRosa, Enrico Parrinello (U. Catania, Italy) Gerhard Ziegmann, Ahmed El Sabbagh (Clausthal-Zellerfeld, Germany), ICCE-22, July 13-19, 2014 Saint Julian's, Malta
  25. "Natural fibre reinforced plastics – Effect of injection moulding and primer on mechanical properties", Leif Steuernagel, A. El-Sabbagh, Narotech, 16-17 September 2014
  26. "Innovation of flame retardant engineering plastics reinforced with natural fibre", A. El-Sabbagh, J. Ring and O. Toepfer, Second international conference on natural fibers ICNF 2015, Ponta Delgada, Portugal
  27. "Development of natural fibre/engineering plastics composites with flame retardance properties", A. El-Sabbagh, L. Steuernagel, J. Ring and O. Toepfer, Polymer Processing Society Conference - PPS2015, Graz, Austria, 2015
  28. "Flowability and fibre content homogeneity of natural fibre polypropylene composites in injection moulding", A. El-Sabbagh, A. Ramzy, L. Steuernagel and D. Meiners, Polymer Processing Society Conference - PPS2015, Graz, Austria, 2015
  29. "Processing parameters and Characterisation of Flax Fibre Reinforced Engineering Plastic Composites with Flame Retardant Fillers", A. El-Sabbagh, L. Steuernagel, G. Ziegmann, D. Meiners & O. Toepfer Tagungsband 1. Niedersächsisches Materialtechnik Symposium, 2015, ISBN 978-3-8440-3403-5





30. "New polymeric composites for medical disposables manufacturing", M.L.Tawfic, A. M. Elsabbagh, L. Steuernagel and Yasser Assem ELGamal, Global Conference on Polymer and Composite (PCM), 20-23 May 2016, Hangzhou, China
31. "Selection chart of flame retardants for natural fiber polymer composites", A. Elsabbagh, A. Ramzy, T. Attia and G. Ziegmann, ICNF 2017, 21-23 June, 2017, Braga, Portugal
32. Distribution of synthetic/ natural reinforcements in injection moulded thermoplastic composites", Ahmed Elsabbagh and Tayseer Attia, ICCE 25, 16-22 July, 2017, Rome, Italy

#### **Non-Peer Reviewed Publications in Conferences**

1. A. El-Sabbagh, "Fluid Flow And Solidification Simulation in Thin Plate Aluminium Castings" Presentation in FEP Fraunhoufer Intitute in Dresden- Germany, 1st September 2005,
2. Mohamed A. Taha, Nahed A. El-Mahallawy, Ahmed M. El-Sabbagh and Heinz Palkowski, "Rolling behaviour of cast particulate-reinforced aluminium matrix composites", Egyptian-German Year of Science & Technology Materials Science Workshop on Materials Based Manufacturing Technologies May 7th - 9th 2007 CMRDI, Helwan, Cairo, Egypt
3. M. Topp, S. Reich, A. El-Sabbagh, L. Steuernagel, „Naturfasern – Neue Möglichkeiten zur Einstellungen definierter Eigenschaften in aserverbunden“, 10. Symposium Nachwachsende Rohstoffe für die Chemie, Oldenburg 2007,
4. A. El-Sabbagh, I. Taha, L. Steuernagel, G. Ziegmann, „Stiffness and Strength of Thermoplastic Composites Reinforced with Natural Fibres: Modelling and Experimentation of PP/Flax“, 6. Internationales Symposium „Werkstoffe aus Nachwachsenden Rohstoffen“, naroteck Erfurt, 6. September 2007
5. I. Taha, A. El-Sabbagh, G. Ziegmann, „Modelling of the Behaviour of Natural Composites“, Egyptian German year of science and technology, GUC, Dec. 3-5, 2007
6. A. El-Sabbagh, "Effect of the Compounding Method on the Natural Fibre Reinforced Polymer Composites (Flax/PP)", FNR research results, JENA, 29.05.2008
7. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, "Mechanical Properties Modelling of Natural fibre Thermoplastic Composites", Abschlussworkshop zum Projekt:NF-Guidelines 2009, September 22-23, Bremen
8. A. El-Sabbagh, "Verbesserung des Brandverhaltens von natufaserverstärkten Kunststoffen", Abschlussworkshop zum Projekt:NF-Guidelines 2009, September 22-23, Bremen
9. A. El-Sabbagh, S. Reich-Albrecht, M. Giese, L. Steuernagel, G. Ziegmann, „Draping of Natural Fibre Woven Composites“, Internationales Symposium „Werkstoffe aus Nachwachsenden Rohstoffen“, Naroteck Erfurt, 9. September 2010
10. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, O. Toepfer „Flame Retardance Effect of Aluminium Hydroxide on Natural Fibre Reinforced Composites“, AVK 1.Fachtagung, Flammschutz bei Composites Anwendungen, 12 April 2011, Frankfurt Am Main
11. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, "Natural Fibre Reinforced Composites: Application of Inorganic Flame Retardants", Festkolloquium am 22./23. September 2011 in der Aula Academica der TU Clausthal anlässlich des 65. Geburtstages von und der Verleihung der Niedersachsenprofessur an Prof. Dr.-Ing. Gerhard Ziegmann



## Poster Form Publications in Conferences

1. A. Elsabbagh, L. Steuernagel and G. Ziegmann, "Modelling of the Mechanical Properties of Flax Fibre/Polypropylene Composite", Proceedings of the Polymer Processing Society 24th Annual Meeting ~ PPS-24, Salerno (Italy), June 15-19, 2008
2. A. Elsabbagh, L. Steuernagel and G. Ziegmann, "Effect of Fibre/Matrix Modification on the Mechanical Properties and Water Absorption of Extruded Flax/Polypropylene Composite", Proceedings of the Polymer Processing Society 24th Annual Meeting ~ PPS-24, 2008 Salerno (Italy), June 15-19
3. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, "Mechanical Properties versus Flammability of New/Recycled Polypropylene/Flax Composites/Magnesium Hydroxide", SAMPE 2010, 24-25 February, Clausthal
4. A. El-Sabbagh, L. Steuernagel and G. Ziegmann, "Effect of Twin Screw Extruder Layout on Natural fibre Polymer Composites", Stoffliche Biomassenutzung mit Innovationen den Wirtschaftsstandort Deutschland stärken, 15 December, Berlin 2010
5. A. Ramzy, A. Elsabbagh, L. Steuernagel, D. Meiners, G. Ziegmann, "Natural Fibre Composites Simulation - Material and Flow Models for Natural Fiber Reinforced Injection Molding Materials", Kunststofftrends im Automobil, Wolfsburg, Ostfalia 5. September 2013
6. S. Reich-Albrecht, A. Ramzy, A. El-Sabbagh, L. Steuernagel and G. Ziegmann, "VARI Technique and Drapability of Jute Fibres", Stoffliche Biomassenutzung mit Innovationen den Wirtschaftsstandort Deutschland stärken, 15 December, Berlin 2010
7. A. El-Sabbagh, L. Steuernagel and G. Ziegmann, "Effect of Twin Screw Extruder Layout on Natural fibre Polymer Composites", SAMPE-Symposium, Institut für Kunststoffverarbeitung (IKV) an der RWTH, Aachen, 16. -17. Februar 2011
8. S. Reich-Albrecht, A. Ramzy, A. El-Sabbagh, L. Steuernagel and G. Ziegmann, "VARI Technique and Drapability of Jute Fibres", SAMPE-Symposium, Institut für Kunststoffverarbeitung (IKV) an der RWTH, Aachen, 16. -17. Februar 2011
9. A. El-Sabbagh, M. Soliman, M. Taha, H. Palkowski "Sequential Rolling and Heat Treatment of Stir Cast Aluminium Silicon Carbide Composite", Euro ECAA 2011, 5-7 October 2011 in Bremen, Germany
10. A. El-Sabbagh, L. Steuernagel, G. Ziegmann, D. Meiners, „Processing Parameters and Characterisation of Flax Fibre Reinforced Engineering Plastic Composites with Flame Retardant Fillers", Niedersächsisches Symposium Materialtechnik (NSM), 12-13 Feb 2015, Clausthal, Germany
11. M.L.Tawfic, A.M. Elsabbagh and S.M.M.Morsi, "Oxo- degradable and biodegradable polymers blend for wound dressing pad manufacturing", ICNF 2017, 21-23 June, 2017, Braga, Portugal



## **Supervision**

### **a- Studiuarbeit/ Bachelor thesis**

1. Marten Giese, Studium arbeit, Untersuchung zur Drapierfaehigkeit von Naturfasern, 2011
2. Mohamed Elsherqawy, Effect of the Processing Parameters (Injection Molding) on the Natural Fibre Geometry“, Bachelorarbeit, 2013
3. Mohamed Raafat, “Effect of the processing parameters on fiber content along injection moulded spirals”, Bachelorarbeit, 2013
4. Ali El-Khattam, “The flame resistance and mechanical properties of natural fibre thermoplastic composites”, Bachelorarbeit“, 2013
5. Emir Colakovic, „Beitrag zum Fließverhalten Naturfaserverstärkter Compounds inklusive Faseranalytik“, Studienarbeit, 2015
6. Maria Stehle, „Topic Recycling Einfluss auf NF verstärkte thermoplaste“, Bachelorarbeit, 2016
7. Sef Samer, „Reinforcing of ABS Blends with natural versus glass fibres by corotating extruder“, Bachelorarbeit, 2016
8. Mohamed Abuzaid, „Extrusion of flame retardant ABS natural fibre composites“, Bachelorarbeit, 2016
9. Yahia Abuzaid, “Rheological, flame retardance and thermal characterisation of fibre reinforced ABS Blends”, Bachelorarbeit, 2016
10. Ashraf kamel Abu elenen, „One step Joining/forming of PA/Glass fibre/Steel Hybrid structures“, Bachelorarbeit, 2016
11. Omneya Mahmoud, „One step Joining/forming of PA/Steel Hybrid structures“, Bachelorarbeit, 2016
12. Replacing Carbon Fibers with Natural Fibers/Glass Fibers in a Prosthetic ankle Foot , 2018
13. Internal cathodic protection, 2018
14. External cathodic protection, 2018

### **b- Master thesis/ Diplomarbeit**

1. Fady El-Sabbagh, M.Sc. (2007) Investigation of Toughness and Microstructure in Welded Joints of 25% Cr Corrosion Resistant Steels, Ain Shams university (Role: Co-supervisor)
2. Qiang. Hao, “Charakterisierung von rheologischen, thermischen und mechanischen Eigenschaften von naturfaserverstärkten Thermoplast Materialien und Simulation des Spritzgießprozesses “, Diplomarbeit 2013
3. Peizhe Sun, “Herstellung von Metallerzeugnissen Polymer-Hybrid-Struktur unter Verwendung von heißen mechanischen Verfahren“, Diplomarbeit, 2016

### **c- Review of dissertations**

1. Alia Ahmed Diao Eldeen, Master, Effect of Alloying Elements and Processing Techniques on the Properties of Some Mg-alloys, 2017
2. Hassan Eltwery, Master, "Assessment of Some Al Alloy Products produced by Special Casting Technique, 2018
3. Hesham Abdeldaim. Master, Development of Bond Layer and Coating Techniques in Thermal Barrier Coating, 2018
4. Lobna Elsefy, Master (GUC), Investigating the Effect of the Chemical Treatment on the Properties of a Novel Microfibrillated Long Date Palm Fibers
5. Marwan, Abdelwahed, Master, 2017, Formability and Rolling of Ductile Iron subjected to different Thermo-mechanical treatments



بيان بالمجلات التي تم التحكيم لها دوليا

| Journal name                                  | Paper title                                                                                                                                       | Date           |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Materials                                     | Melt-flow Behaviours of Thermoplastic Materials under Fire Conditions: Recent Experimental Studies and Some Theoretical Approaches                | October 2015   |
| Advances in polymer technology                | Mechanical characterization of discarded monofilament fishnet/glass fiber and polyester hybrid composites                                         | September 2015 |
| Polymer testing                               | Mechanical characterization of novel Latania natural fiber reinforced PP/EPDM Composites                                                          | July 2015      |
| Experimental techniques                       | Some observations on measuring sound-speeds in polymers using time-of-flight                                                                      | March 2015     |
| Composites: Part A                            | Non-destructive automatic determination of aspect ratio and cross-sectional properties of fibres                                                  | May 2015       |
|                                               | Development of natural fibre reinforced flame retarded epoxy resin composites                                                                     | September 2014 |
|                                               | Evolution of lignocellulosic fibre lengths along the screw profile during twin screw compounding with polycaprolactone                            | October 2013   |
| Polymer engineering and Science               | Fabrication and characterization of acrylonitrile-butadienestyrene nanocomposites reinforced with cellulose nanocrystal                           | November 2014  |
| Journal of reinforced plastics and composites | Fabrication and characterization of acrylonitrile-butadienestyrene nanocomposites reinforced with cellulose nanocrystal                           | September 2014 |
|                                               | Low temperature pyrolysis of carboxymethylcellulose                                                                                               | August 2016    |
| Composites Part B                             | Influence of compatibilizing system on morphology, thermal and mechanical properties of high flow polypropylene reinforced with short hemp fibers | August 2014    |
|                                               | Developing a New Generation of Sisal Composite Fibres for Use in Industrial Applications                                                          | Februar 2014   |
|                                               | Viscoelastic Characterization of Continuous Fiber-Reinforced Thermoplastic Sheets Using Bending Test Results                                      | September 2011 |
| Polymer                                       | Thermal Properties and Kinetic Investigation of Chitosan-PMAA Based Dual-responsive Hydrogels                                                     | August 2014    |
| Wear                                          | Tribological property of epoxy-glass fiber reinforced and nanoclay filled hybrid composites                                                       | May 2014       |
| Journal of composite materials                | Simultaneous optimization of the mechanical properties of postconsumer natural fiber/plastic composites: Processing analysis                      | January 2014   |
| Journal of applied polymer science            | Preparation and Characterization of Bamboo Fibres coated with Urushiol-ferric and its Composite with Polypropylene                                | October 2010   |



|                                 |                                                                                                                                                   |                |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                 | Mechanical reinforcement of poly(1-butene) using polypropylene-grafted multiwalled carbon nanotubes                                               | October 2008   |
|                                 | Effect of corn zein coating on the mechanical properties of PP packaging films                                                                    | January 2009   |
|                                 | Durable flame retardant finishing of PET/cotton blends using a novel PVA-based phosphorus-nitrogen polymer                                        | January 2011   |
|                                 | Nanoindentation of isotactic polypropylene: correlation between hardness, yield stress and modulus in local and global scale                      | July 2010      |
|                                 | Lignocellulosic Byproducts as Filler in Polypropylene: Comprehensive Study on the Effects of Compatibilization and Loading                        | September 2011 |
| Ultrasonics                     | Measurement of Speed of Sound in Poly(Lactic Acid)-Clay Composite                                                                                 | September 2013 |
| Advanced materials research     | Mathematical Model to Characterization Short Carbon Fiber Reinforced Polypropylene Composite                                                      | March 2010     |
| Polymer engineering and science | The plasticating sequence in barrier extrusion screws                                                                                             | April 2013     |
|                                 | Relationship between the aggregate state of organomontmorillonite and the flammability of flame retardant polypropylene                           | January 2011   |
| Polymer composites              | Study the effect of viscoelastic matrix model on the stability of CNT/polymer composites by multiscale modelling                                  | May 2008       |
|                                 | Quantitative 3D Measurement of the Nanostructural Features that Dictate Mesoscale Performance Properties of Nanocomposites                        | June 2009      |
| Industrial Crops and Products   | The effects of coupling agent and copolymer on morphological, thermo-mechanical properties of jute fiber /bamboo fiber/polyethylene biocomposites | August 2016    |



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2<sup>nd</sup> International Conference on **Natural Fibers**

27 . 28 . 29 april 2015 SÃO MIGUEL AZORES PORTUGAL

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with the work on

*Development of novel flame retardant natural fibers reinforced  
engineering plastic composites by extrusion*

*Raul Figueiro*  
Conference Chair  
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مستندات الترشيح لجائزة النيل  
فى العلوم الهندسية  
لعام 2017

للأستاذ الدكتور/ احمد على سالم الصباغ

الأستاذ المتفرغ بقسم التصميم وهندسة الانتاج

كلية الهندسة – جامعة عين شمس



مستندات الترشيح لنيل إحدى

جوائز النـسـبـل لعام ٢٠١٧

فى العلوم / العلوم التكنولوجية المتقدمة

الهيئة المرشحة كلية الهندسة - جامعة عين شمس

مجال الجائزة : ( العلوم / العلوم التكنولوجية المتقدمة ) العلوم

فرع العلوم : ( الأساسية / الزراعية / الطبية / الهندسية ) الهندسية

اسم المرشح : أ. أحمد علي سالم الصباغ

الوظيفة : استاذ متفرغ - قسم التصميم والانتاج - كلية الهندسة - جامعة عين شمس

تاريخ الميلاد : 7/9/1924 جهة الميلاد : بيلا - محافظة كفر الشيخ

البريد الإلكتروني : elsabbagh@gmx.de

تليفون : 22906750 موبايل : 01223316445 عمل :

عنوان لم residence : 5 شارع النادي 1.1341 مصر الجديدة - القاهرة

قائمة المستندات المطلوبة

أولاً : استمارة طلب الترشيح : ( تلصق صورة فوتوغرافية حديثة على الاستمارة )

1. صورة من بطاقة الرقم القومى ( ملونه ) 2. استمارة بيانات متقدم ( تلصق صورة فوتوغرافية على الاستمارة )

3. اسم المرشح على موقع Scopus 4. عدد 4 صورة ملونه للمرشح ( 4 x 6 )

ثانياً : النشر العلمى الدولى والخصى : ( ستعرض الأبحاث على برنامج Plagiarism )

( أ ) قائمة منفصلة باللغة الانجليزية للدوريات العلمية المنشور بها كافة أبحاث المرشح موضحا بها Impact Factor لكل منها + المجموع ( مرفق نموذج ( أ ) ، صورة من موقع ISI لأبحاث المرشح

( ب ) استخراج الـ H-index لتجمل إنتاجه العلمى المنشور دولياً . ( مرفق نموذج ب ) ، صورة من موقع Scopus للمرشح

( ج ) قائمتان منفصلتين باللغة الانجليزية : الأولى للأبحاث المنشورة محلياً ، والثانية للأبحاث المنشورة دولياً

( د ) قائمة مختومة للأبحاث العلمية خلال العشر سنوات الأخيرة يعد عرضها على برنامج Plagiarism ( ان امكن ) ، مرفقا بها نسخة إلكترونية عليها فقط الأبحاث المنشورة خلال العشر سنوات الأخيرة كاملة ( هام جدا ) من المجلس الأعلى للجامعات أو الشبكة القومية للمعلومات . أكاديمية البحث العلمى

ثالثاً : السيرة الذاتية والنشاط العلمى للمرشح معتمدة وموثقة وتضمن :

- المؤهلات العلمية والتدرج العلمى والوظيفى
- الرسائل العلمية . المؤلفات العلمية (من غير كتيب التدريس )
- إنشاء معامل أومراكز تميز - براءات اختراع أصلية
- جوائز عالمية أو إقليمية . تقدير علمى أكاديمى ( D.S.C ) . جوائز تقديرية
- المؤتمرات الدولية وورش العمل الدولية
- الدوريات العلمية المفهرسة ( الإشتراك فى أسر التحرير . رئاسة تحرير . التحكيم لمجلات علمية دولية )

رابعاً : النشاط الاجتماعى :

- مشروعات بحثية ممولة ذات مردود مجتمعى ( نموذج ج )
- المساهمة فى ( تأسيس شعبة أو قسم أكاديمى )
- تنفيذ برامج تدريب وتنمية موارد بشرية وتعليم مستمر تخدم المجتمع
- المساهمة فى حل مشكلات قومية
- أنشطة أخرى لخدمة المجتمع مثل : الإشتراك فى مجالس إدارة أو لجان الجمعيات العلمية والمجالس القومية والدولية وغيرها

خامساً : مبررات الترشيح : Mes Word بالإضافة إلى النسخة الورقية ( مرفق نموذج د )

❖ الأوراق المقدمة للجائزة لا ترد

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## أولاً: إستمارة طلب الترشيح

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3. اسم المرشح على موقع Scopus



استمارة طلب الترشيح

لجائزة النيل

السيد الأستاذ الدكتور / رئيس أكاديمية البحث العلمي والتكنولوجيا

تحية طيبة .. وبعد ،

نتشرف ( جامعة / مركز / معهد / جمعية ) جامعة عين شمس

بترشيح الأستاذ الدكتور / أحمد على سالم الصباغ

الوظيفة : استاذ متفرغ - قسم التصميم والإنتاج - كلية الهندسة - جامعة عين شمس

لجائزة النيل في مجال ( العلوم / العلوم التكنولوجية المتقدمة ) : العلوم

العلوم (الأساسية / الزراعية / الطبية / الهندسية ) : الهندسية

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رئيس الجهة

ختم الجهة

- في حالة الترشيح من قبل الجمعيات العلمية ، يجب أن تكون الجمعية في مجال تخصص المرشح ، وأن يكون قد مر على إنشاء الجمعية ما لا يقل عن خمس سنوات .

# 1. صورة الرقم القومي ملونة



## 2. استثمار بيانات متقدم



وزارة التعليم العالي والبحث العلمي  
أكاديمية البحث العلمي والتكنولوجيا  
الإدارة العامة للجوائز والحوافز

قاعدة بيانات متقدمين وفائزين  
( استثمار بيانات مرشح )

لجائزة النيسل لعام ٢٠١٧

|           |                           |
|-----------|---------------------------|
| رقم القيد | خاص بإدارة العامة للجوائز |
|-----------|---------------------------|

مايلي يملأ بمعرفة المرشح بكل دقة ووضوح وعلى مسئوليتته الخاصة :

|              |                 |                 |               |                 |   |
|--------------|-----------------|-----------------|---------------|-----------------|---|
| جوائز العلوم | العلوم الأساسية | العلوم الزراعية | العلوم الطبية | العلوم الهندسية | X |
|--------------|-----------------|-----------------|---------------|-----------------|---|

أو

|                                      |                 |                 |               |                 |  |
|--------------------------------------|-----------------|-----------------|---------------|-----------------|--|
| جوائز العلوم<br>التكنولوجية المتقدمة | العلوم الأساسية | العلوم الزراعية | العلوم الطبية | العلوم الهندسية |  |
|--------------------------------------|-----------------|-----------------|---------------|-----------------|--|

➤ يختار مجال واحد فقط... جوائز العلوم أو جوائز العلوم التكنولوجية المتقدمة

|                   |                      |
|-------------------|----------------------|
| اسم المتقدم رباعي | أحمد على سالم الصباح |
|-------------------|----------------------|

|                      |                             |             |             |
|----------------------|-----------------------------|-------------|-------------|
| الرقم القومي للبطاقة | 5 5 7 0 0 5 1 7 0 9 0 2 2 4 | جهة الإصدار | مصر الجديدة |
|----------------------|-----------------------------|-------------|-------------|

|                |               |
|----------------|---------------|
| رقم حساب البنك | 9 / 1 4 5 0 5 |
|----------------|---------------|

|           |              |           |             |
|-----------|--------------|-----------|-------------|
| اسم البنك | البنك الاهلي | فرع البنك | مصر الجديدة |
|-----------|--------------|-----------|-------------|

|               |       |       |       |             |                  |
|---------------|-------|-------|-------|-------------|------------------|
| تاريخ الميلاد | اليوم | الشهر | السنة | جهة الميلاد | بيلا - كفر الشيخ |
| 7             | 9     | 1924  |       |             |                  |

|            |         |      |         |
|------------|---------|------|---------|
| خريج جامعة | عين شمس | كلية | الهندسة |
|------------|---------|------|---------|

|                |       |             |                |         |               |
|----------------|-------|-------------|----------------|---------|---------------|
| الدرجة العلمية | أستاذ | أستاذ متفرغ | كلية معهد شعبة | الهندسة | جامعة عين شمس |
|                |       | X           |                |         |               |

أو

|         |             |
|---------|-------------|
| الوظيفة | أستاذ متفرغ |
|---------|-------------|

|          |               |       |        |        |             |
|----------|---------------|-------|--------|--------|-------------|
| عنوان    | رقم 5         | شارع  | النادي | مدينة  | مصر الجديدة |
| المراسلة | الرقم البريدي | 11341 | ص. ب   | محافظة | القاهرة     |

|             |          |          |          |        |             |
|-------------|----------|----------|----------|--------|-------------|
| تليفون منزل | 24175558 | منزل عمل | 22906750 | موبايل | 01223316445 |
|-------------|----------|----------|----------|--------|-------------|

|                   |                  |        |  |
|-------------------|------------------|--------|--|
| البريد الإلكتروني | elsabbagh@gmx.de | E-mail |  |
|-------------------|------------------|--------|--|

|              |      |              |  |
|--------------|------|--------------|--|
| تاريخ الترشح | ٢٠١٧ | توقيع المرشح |  |
|--------------|------|--------------|--|

# برفق عدد ٤ صور ملونة حديثة



(3) اسم المرشح على موقع Scopus

Ahmed Elsabbagh

## ثانياً: النشر العلمي والدولي

1) قائمة باللغة الانجليزية للدوريات العلمية المنشور بها (نموذج أ)

2) نموذج ب وصورة من موقع Scopus للمرشح

3) قائمتان منفصلتان باللغة الانجليزية للابحاث المنشورة دوليا ومحليا.

4) قائمة مختومة للابحاث المنشورة في ال10 سنوات الاخيرة

(1) قائمة باللغة الانجليزية للدوريات العلمية المنشور بها  
(نموذج أ)

List of International Journals used for Publication  
with Impact Factor

| No. | Journal Title                      | No. of Papers<br>Published in<br>Journal | Impact<br>Factor for<br>Journal | Sum of<br>Impact<br>Factor |
|-----|------------------------------------|------------------------------------------|---------------------------------|----------------------------|
| 1   | Technical Bulletin                 | 2                                        |                                 |                            |
| 2   | Powder Metallurgy                  | 1                                        |                                 |                            |
| 3   | Welding Journal                    | 1                                        | 0.43                            |                            |
| 4   | Computational Materials<br>Science | 1                                        | 1.574                           |                            |
| 5   | Pract. Met.                        | 1                                        |                                 |                            |
| 6   | Indian Foundrymen                  | 1                                        |                                 |                            |

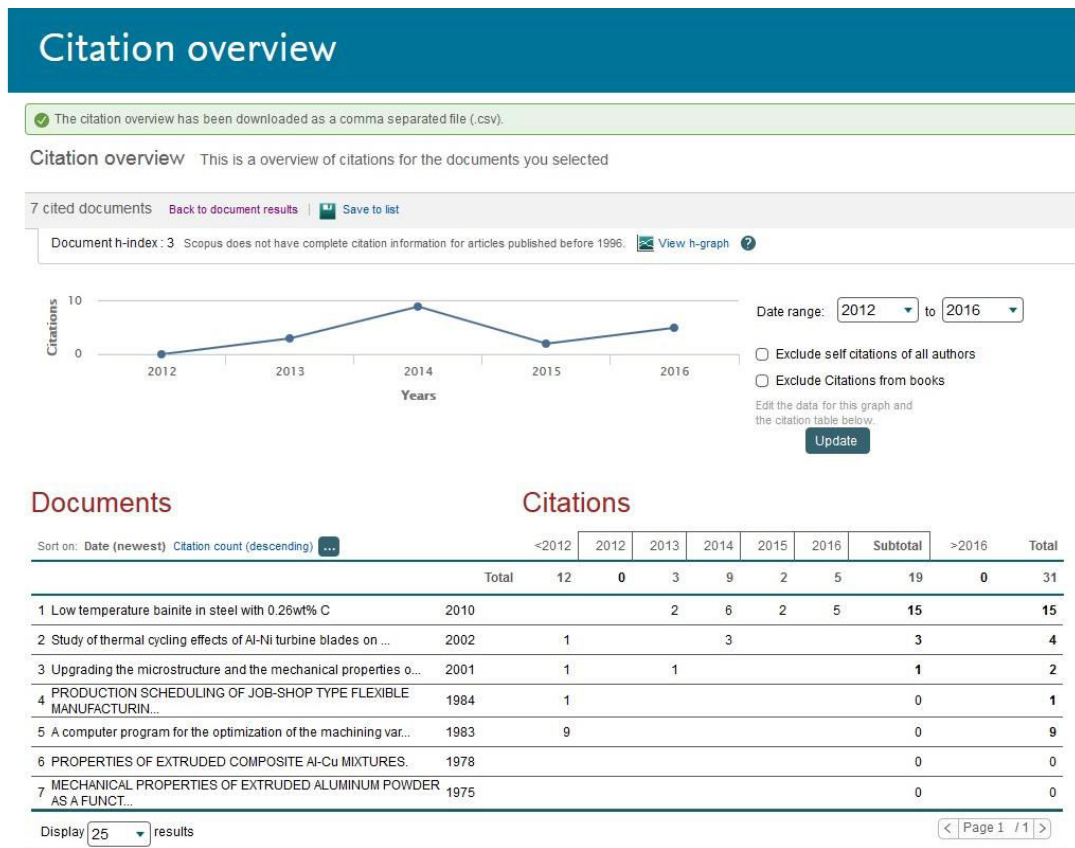
## (2) نموذج ب وصورة من موقع Scopus للمرشح

|                 |             |
|-----------------|-------------|
|                 | موقع Scopus |
| Total Citations | 31          |
| H - Index       | 3           |

Scopus

*Ahmed Elsabbagh*

*h-index = 3*



### (3) قائمتان منفصلتان باللغة الانجليزية للابحاث المنشورة دوليا ومحليا.

#### International Publications

1. Strengths of Brazed Joints at High Temperatures, Published in German Language under the title: Untersuchungen über die Warmfestigkeit der Hartlötverbindungen. Westdeutscher Verlag Köln und Opladen, Forschungsberichte des Landes Nordrhein- Westfalen, Heft 1083, 1963.
2. Solderability of Tinned Copper Wires, in English, Military Research and Development Directorate Technical Bulletin, V 01. No. 3 July 1966, Cairo.
3. Problems Relating the Design, Production and Testing of Honeycomb Structures, Technical Bulletin, Vo1. 1, No. 3, July 1966, Cairo.
4. Effect of Grain Size and Shape of Aluminium Powder on the Mechanical Properties of Extruded Bars, Powder Metallurgy International, V 01. 3, 1974.
5. Shear Strength of Brazed and Soldered Joints, American Welding Society Welding Journal, S 276 - 279, August, 1975.
6. Elastic Vibration to Modify - Al Cast Structure, Indian Foundrymen, August 1974.
7. Properties of Extruded Composite Al - Cu Mixtures, 8th International Machine Tool Design and Research Conference, Imperial College, London, September, 1977.
8. Effect of MIG Operational Parameters on the Welding of Al, Heat and Mass Transfer in Metallurgical Systems, 3. - 7. 9. 1979, Dubrovnik, Yugoslavia.
9. Microstructure Description of Al - Cu - Ni ternary Alloys in the Al - Rich Corner. Pract. Met. 20 (1983) 5-02 - 522.
10. Production Scheduling of Job Type Flexible Manufacturing System Robotics and Factories of the Future. Proceedings of an International Conference, Charlott, N.C., USA, Dec. 4 -7, 1984.
11. Effect of grain size of composites of copper tungsten under shear stress. A. El-Magd, A. Salem, S. Ataya, M. Krautker. Computational Material Science 2007 vol. 30, 219-223.

## **National Publications**

- 1- Effect of the Grain Size on the Rate of Discontinuous Precipitation in Cu+ 5% Ag - Alloy, Introduced to the International Conference for Material Science held at the American University, Cairo, April, 1973.
- 2- Effect of Radial Tension and Compression Forces on the Shear Strength of Brazed and Soldered Joints, Read and Published at the Welding - Conference, 11 - 14.1. 19.74, National Research Centre, Cairo.
- 3- Problems Encountered in Welding of Al and Al – Alloys. Read and Published at the Welding - Conference, 11.14. 19.74, National Research Centre, Cairo.
- 4- Factors Affecting the Cold Welding of Aluminium. Read and Published at the Welding - Conference, 11. - 14. 19 - 74. National Research Centre, Cairo.
- 5- On Line Simulation Model for Scheduling a Flexible Manufacturing System.
- 6- Proc. of the 1st International. Ain Shams Univ. Conference on Production Eng. and Design for Development, Dec., 1984.
- 7- A detailed Research 74 Pages about the new materials up to year 2000 introduced to the national specialized council. 2002

## (4) قائمة مختومة للابحاث المنشورة في ال10 سنوات الاخيرة تنويه

في بند البحوث التي أجريت في العشر سنوات الأخيرة بمعنى انه كان عمري 83 عام وحتى الان حيث بلغت من العمر 94 عام، لم أجرى بحوث الا بحث واحد بدعوة من معهد المواد بجامعة اخن بألمانيا الذي تخرجت فيه، وانهيت درجة الدكتوراه، وهو البحث رقم 9 لعام 2007، ثم بدأت صحتي تتدهور ولم أتمكن من أي عمل بحثي اللهم الا الاشراف على رسالة ماجستير رقم 43 لعام 2006 ثم الاشراف على رسالة الدكتوراه رقم 24 لعام 2010، ثم اصبحت للأسف الشديد بتدهور في قوة الابصار ورغم اجراء 4 عمليات في المانيا إلا ان النتيجة وصلت الى 5% ابصار ولذلك لم استطع القراءة والكتابة وتوقفت عن البحوث.



## موجز السيرة الذاتية

الاسم: أ.د أحمد على سالم الصباغ

- **المؤهلات العلمية:** بكالوريوس هندسة ميكانيكية جامعة عين شمس 1954 بامتياز ودكتوراه من جامعة آخن بألمانيا الغربية جيد جدا (1961) R.W.T.H Aachen.
- **اللغات:** الألمانية – الإنجليزي – العربية لغة الوطن.
- **الخبرات العلمية –** تدريب عملي في مصانع انجلترا وألمانيا – وخبرة العمل في مصانع الطائرات النفاثة في مصر.
- **التسلسل الوظيفي :** التدرج في وظائف معيد ومدرس وأستاذ مساعد وأستاذ في جامعة عين شمس وهندسة القاهرة وهندسة حلب (إعارة).
- **النشاط البحثي المنفرد:**  
17 بحثا علميا منفردا ومجموعا في مجال هندسة الإنتاج وهندسة المواد والهندسة الصناعية + توقفت الأبحاث بسبب انحصار قوة الأبصار فأصبحت لا تزيد عن 5%.
- **الإشراف على الرسائل العلمية:**  
24 رسالة دكتوراه .  
43 رسالة ماجستير
- استشارات هندسية للعديد من الشركات والمصانع.
- **المؤلفات العلمية:**  
12 كتابا عمليا باللغة العربية في المجالات الهندسية والتكنولوجية منها القيام بالنصيب الأكبر في إعداد الجزء الأول لمعجم المصطلحات الهندسية الميكانيكية الصادر من مجمع اللغة العربية في عام 2001 والجزء الثاني يصدر قريبا – الإسهام في معجم الفيزياء الجزء الأول والجزء الثاني الذي صدر هذا العام ومعجم الحاسبات الصادران 2008 – 2010 والجزء الثاني 2012 والجزء الثالث 2014.
- **الترجمات:**  
7 أصول عمل هندسي من الألمانية لجمعية المهندسين المصرية + 10 كتب فنية من الألمانية للعربية 1979.
- **ابتكارات :**  
ابتكارات 12 تصميمات جديدة لسخانات شمسية وإنتاجها بمواد محلية عمليا واختبارها.
- **عضوية الجمعيات والمجامع والهيئات العامة:**

- عضوية مجمع اللغة العربية 1995 حتى الآن.
- عضو المجلس القومى للإنتاج والشئون الاقتصادية 1995 حتى 2016.
- عضو المجلس القومى للتعليم والبحث العلمى 1995 حتى 2016.
- عضو المجمع العلمى المصرى 1996 حتى الآن.
- عضو المجمع المصرى للثقافة العلمية.
- عضو جمعيات اللحام الأمريكية والألمانية والمصرية.
- عضو جمعية السباكة المصرية – جمعية المهندسين المصريين – عضو مجلس إدارة مركز بحوث وتطوير الفلزات سابقا – عضو لجنة بحوث الصناعة بأكاديمية البحث العلمى والتكنولوجيا – وبعض الجمعيات الهندسية الأخرى سابقا.
- **مشروعات بحثية وتعليمية كبرى:**
  - إدخال مفاهيم وتطبيقات التكنولوجيا فى التعليم العام ولتطوير المدارس الصناعية أهتداء بنظام التعليم الفنى المزدوج الألمانى Dual System.
  - إنشاء كليات التعليم الصناعى فى القبة وبنى سويف والسويس وانتشرت بعد ذلك إلى سوهاج لتخريج مدرسين مؤهلين جيدا للعمل فى المدارس الصناعية وقد جهزت هذه الكلية بأحدث المعدات والأجهزة التدريبية.
  - **الأسهام فى إنتاج كلى لعدد يفوق 1000 مضخة من مضخات تحويل رى الحياض إلى رى دائم بعد إنشاء السد العالى.**

## ثالثاً: السيرة الذاتية والنشاط العلمي

(1) المؤهلات العلمية والتدرج الوظيفي (C.V.)

(2) الرسائل العلمية – المؤلفات العلمية

(3) إنشاء معامل

(4) جوائز – تقدير علمي أكاديمي

(5) المؤتمرات الدولية وورش العمل الدولية

(6) الدوريات العلمية المفهرسة

## 1) السيرة الذاتية والنشاط العلمي

المؤهلات العلمية الحاصل عليها الأستاذ الدكتور / احمد على سالم الصباغ ومكانها وتاريخ الحصول عليها، وبيان معتمد بالتاريخ العلمي والوظيفي

أ- المؤهلات العلمية

الحاصل عليها الأستاذ الدكتور / احمد على سالم الصباغ

بكالوريوس هندسة ميكانيكية جامعة عين شمس 1954 بامتياز ودكتوراه من جامعة آخن بألمانيا الغربية  
جيد جداً R.W.T.H Aachen (1961).

ب- بيان معتمد بالتاريخ العلمي والوظيفي

### للأستاذ الدكتور / احمد على سالم الصباغ

- 1961 – 1954 : بدء العمل بوظيفة معيد ودراسة الدكتوراه فى ألمانيا الغربية.
- 1962 – 1961 : مدرس هندسة المواد والإنتاج والهندسة الصناعية بكلية الهندسة –  
جامعة عين شمس.
- 1964 – 1962 : مدير معامل المواد واختباراتها بمصانع الطائرات 135 للمحركات  
النافثة لإنتاج الطائرتين القاهرة 100 ، 300 وقد بدأ مشروعاً ناجحاً  
لولا التوقف 1967.
- المهام الرئيسية :
- الرقابة على كل أجزاء المحركات قبل وبعد الإنتاج.
  - إعطاء التعليمات والتعديلات الخاصة بالإنتاج والمعالجات  
الحرارية.
  - القيام بدورات تنشيطية لمهندسى المصنع إجراء عمليات لحام  
ناجحة فى أجزاء الطائرة لم يتمكن الفريق الألمانى بإجرائها
  - إدارة شئون المعامل.
- 1956 : التدريب العملى فى مصانع ميرليس لمحركات الديزل باستكبورت  
(مانشستر) انجلترا لمدة أربعة أشهر.
- 1961 – 1961 : العمل فى مركز بحوث شركة سيمنز ببرلين بألمانيا.
- 1967 – 1964 : مدرس هندسة المواد والإنتاج والهندسة الصناعية بكلية الهندسة –  
جامعة عين شمس.
- 1969 – 1967 : أستاذ مساعد لهندسة الإنتاج والهندسة الصناعية بكلية الهندسة –  
جامعة القاهرة.
- 1973 – 1972 : أستاذ مساعد فى هندسة القاهرة بقسم التصميم الميكانيكى والإنتاج.

1973 – 1982 : أستاذ هندسة الانتاج والفلات بكلية الهندسة – جامعة عين شمس.

1981 – 1984 : أستاذ ورئيس قسم التصميم وهندسة الإنتاج – كلية الهندسة – جامعة عين شمس.

1984 – للآن : أستاذ متفرع بكلية الهندسة – جامعة عين شمس.

ج - بيان بالوظائف العلمية بالخارج “Absence”

للأستاذ الدكتور / احمد على سالم الصباغ

1969 – 1971 : أستاذ زائر لهندسة الإنتاج والمواد والهندسة الصناعية بكلية الهندسة جامعة حلب بسوريا.

العمل الرئيسي في سوريا :

- إنشاء المعامل والورش بالكلية المستجدة.

- إلقاء محاضرات ووضع التدريبات العلمية في مجال هندسة المواد والإنتاج والهندسة الصناعية.

1972 – 1972 : (الصيف) إجراء بحث علمي في موضوع المعالجة الحرارية بتعقيق بعض المواد المعدنية – في معامل البحوث بالجامعة التقنية ببرلين الغربية بألمانيا وتكرر هذا العمل صيفاً ببرلين لثلاث مرات.

- عضوية الجمعيات والمجامع والهيئات العامة:

- عضوية مجمع اللغة العربية 1995 حتى الآن.
- عضو المجلس القومي للإنتاج والشئون الاقتصادية 1995 حتى 2016.
- عضو المجلس القومي للتعليم والبحث العلمي 1995 حتى 2016.
- عضو المجمع العلمي المصري 1996 حتى الآن.

- عضو المجمع المصرى للثقافة العلمية.
- عضو جمعيات اللحام الأمريكية والألمانية والمصرية.
- عضو جمعية السباكة المصرية – جمعية المهندسين المصريين – عضو مجلس إدارة مركز بحوث وتطوير الفلزات سابقا – عضو لجنة بحوث الصناعة بأكاديمية البحث العلمى والتكنولوجيا – وبعض الجمعيات الهندسية الأخرى سابقا.

## (2) الرسائل العلمية – المؤلفات العلمية

أ- قائمة معتمدة بالرسائل العلمية / المؤلفات العلمية في مجال التخصص من غير كتب التدريس.

ب- قائمة معتمدة بالرسائل العلمية التى أشرف عليها أ.د. احمد على سالم الصباغ

رسائل الدكتوراه :

- 1- تكنولوجيا جودة الانتاج ورش الانتاج. ت. سلطان (1969).
- 2- العوامل المؤثرة على التشكيل وآلية الكسر فى مؤلفات الألومنيوم – النيكل . م. ح عبد اللطيف (1974).
- 3- تأثير التبريد بلوح بارد على لحام سبائك الألومنيوم بالغاز الخامل أ. الصاوى (1975)
- 4- جدولة مركبات أداء العمل الإنسانية فى مستويات مختلفة لإجهادات البيئة الحرارية – م. ى. بشير (1975).
- 5- تأثير شروط القطع والخصائص الديناميكية لماكينه التجليخ السطحى. م.ع. مهدى (1985).
- 6- استخدام طريقة العنصر المحدود فى دراسة الخواص الميكانيكية. أن عبد المحسن (1987).
- 7- دراسة على بثق مسحوق الألومنيوم وأكسيد الألومنيوم على الباراد لتكوين مؤلفات منها. م. زمزم (1985).
- 8- إعداد نظام تخطيط عمليات متكاملة باستخدام الحاسب الآلى ع.م.ع العوام (1987).

- 9- وضع أسلوب علمى لجدولة خلية إنتاجية صناعية ذات تشغيل مرن. ن. عبد النور (1985).
- 10- سباكة وتجمد السبائك المتجمدة جزئياً. ع. عصر (1985).
- 11- دراسة عن تأثير معدل الانفعال فى عمليات التشكيل المرن. و. عبد الغنى (1985).
- 12- تأثير الصيغ الانزلاقية على نمط الحمل الديناميكي لأسنان ترس انفيليتوتى. ر. السعودى (1993).
- 13- ائزان خطوط التجمع ذات التداول العشوائى للعمليات. أ.م. على (1989).
- 14- معالجة الصلب الأوستنيتى حرارياً بعد تعرضه لإجهادات الزحف. ع. مجاهد (1988).
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- 4- تأثير عناصر التسابك على خواص سبائك الألومنيوم. هـ. حافظ (1973).
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- 33- تأثير تغيير بارمترات اللحام بالقوس المغموس على الخواص الميكانيكية للوصلة. م. صالح (1991).
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- 37- تخفيض مستوى الضوضاء للمكنات الصناعية ت.م النادى 2000
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- 42- العوامل المؤثرة على مقاومة وصلات اللحام بالقوس المغمور لألواح الصلب فقير الكربون. م. عبد الفتاح.
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(اسم الكتاب ودار النشر وتاريخ النشر وعدد الصفحات)

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- 4- مقدمة فى هندسة الإنتاج – طبعة أولى مشتركة مع زملاء آخر 1995 وطبعة ثانية مطورة (230 ص) 1998 (دار أمون).
- 5- هندسة لحام المعادن طبعة أولى 1987 طبعة ثانية 1997 (477 ص) دار الشروق
- 6- تكنولوجيا الورش جزء 1 طبعة أولى (198 ص) 1988 + طبعات أخرى مطورة حتى 2000 عين شمس.
- 7- تكنولوجيا الورش جزء 2 طبعة أولى 1988 + طبعات أخرى مطورة حتى 2000 عين شمس.
- 8- **معدات وعمليات التشغيل:**
  - جزء (1) 1989 (190 ص) + طبعات أخرى سنوية بعد ذلك تتولاها وزارة التربية والتعليم.
  - جزء (2) 1990 (240 ص) + طبعات أخرى سنوية بعد ذلك تتولاها وزارة التربية والتعليم.
  - جزء (3) 1991 (207 ص) + طبعات أخرى سنوية بعد ذلك تتولاها وزارة التربية والتعليم.
- 9- **معدات وعمليات (لحام وحدادة)**
  - جزء (2) 1990 + طبعات أخرى سنوية بعد ذلك تتولاها وزارة التربية والتعليم.
  - جزء (3) 1991 (207 ص) + طبعات أخرى سنوية بعد ذلك تتولاها وزارة التربية والتعليم.

10- الإسهام بالمجهود الأكبر فى إعداد معجم مصطلحات الهندسة الميكانيكية من إصدارات مجمع اللغة العربية الذى بدأ العمل فى إعداده عام 1982 وصدر فى صيف 2000 (372 ص) مجمع اللغة العربية.

11- الإسهام فى معجمى الفيزياء طبع فى 2011 الجزء الثانى والحاسوب 2009.

12- اساسيات هندسة صب (سباكة المعادن) مكتبات (عالم الكتب دار المهندسين مكتبة الأنجلو).

#### الترجمات:

1- سبعة أصول العمل الهندسى من الألمانية للعربية لصالح جمعية المهندسين المصرية بالاتفاق مع اتحاد المهندسين الألمان 1980 – 1985.

2- 10 كتب فنية للتعليم الفنى السعودى من الأصل الألمانى 1975 – 1979 دار النشر انتربارت الألمانية.

3- الاشتراك فى ترجمة ومراجعة كتاب فى صيانة وإصلاح السيارات من الإنجليزية للعربية (دار الشروق) 1973 – طبعة ثانية 1975.

#### دراسات:

- دراسة جدوى تصنيع سيارات نقل ثقيل فى مصر لمكتب بايونير (د. عاطف صدقى + د. مصطفى السعيد + محمد حامد محمود).

## مشروعات تنفيذية

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- 1- التصميم د. محمد العطافى سنبل بالاشتراك مع الدكتور سامى ميخائيل
- 2- إعداد فرن الديست (Cupola) من تصميم الدكتور على شعيب وتشغيل الدكتور أحمد سالم الصباغ لإنتاج حديد زهر رمادى
- 3- عملية التشغيل بالخرطة لحديد الزهر الرمادى للدكتور محمود رفقى طاهر والدكتور أحمد سالم الصباغ عدد المضخات يفوق 1000 مضخة.

### (3) إنشاء معامل جديدة وبراءات اختراع أصلية.

- إنشاء 3 كليات تعليم صناعى فى القبة وبنى سويف والسويس.
- الحصول على معمل متكامل من معهد هندسة المواد بجامعة برلين التقنية T.U.Berlin هدية لقسم التصميم وهندسة الانتاج بكلية الهندسة جامعة عين شمس – القيام بشحن المعدات إلى مصر وتركيب المعدات وزنتها 34 طناً وتشغيلها وهى معدات لا تتوافر فى أية كلية هندسة فى مصر منها مكنة درفلة معادن وفرن حثى تحت التفريغ وميكروسكوبات ومعدات اختبار مواد وأفران حرارية كلها من إنتاج شركات ألمانية مرموقة مثل سمينز وزايس ولايتس ويتسلار وغيرها.

4) بيان بالجوائز الحاصل عليها: جوائز عالمية أو إقليمية / تقدير علمى أكاديمي (D.Sc) / جائزة الدولة للتفوق أو التشجيعية.

- جائزة الدولة التقديرية 2004 في العلوم التكنولوجية المتقدمة (هندسة)
- جائزة الابداع العلمى (البنك الأهلي) 2001
- جائزة تقدير من جمعية المهندسين المصرية 1993
- جائزة التميز من نقابة المهندسين 1992

(5) بيان بالمؤتمرات العلمية الدولية وورش العمل الدولية مع الاثبات (رئاسة جلسة / متحدث).

- 1- مؤتمر الطاقة الجديدة والمتجددة، Denver – Colorado, 1982
- 2- مؤتمر هندسة اللغة سنة 2015 في جامعة عين شمس.
- 3- Properties of Extruded Composite Al - Cu Mixtures, 8th International Machine Tool Design and Research Conference, Imperial College, London, September, 1977.
- 4- Effect of MIG Operational Parameters on the Welding of Al, Heat and Mass Transfer in Metallurgical Systems, 3. - 7. 9. 1979, Dubrovnik, Yugoslavia.
- 5- Production Scheduling of Job Type Flexible Manufacturing System Robotics and Factories of the Future. Proceedings of an International Conference, Charlotte, N.C., USA, Dec. 4 -7, 1984.
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- 14- Second international conference on production engineering design and control , Alexandria , Egypt 27-29 December , 1983
- 15- First international Ain Shams University conference on production engineering and design for development , Cairo , Egypt , 27-29 December 1984.
- 16- Third Cairo university conference on Mechanical design and production , Cairo , Egypt , 28-30 December 1985.
- 17- Third international conference on production engineering design and control , Alexandria Egypt 26-28 December , 1986
- 18- Second international Ain Shams university conference on production engineering and design for development, , Cairo , 29-31 December , 1987
- 19- Fourth Cairo University conference on Mechanical design and production Cairo , Egypt , 27-28 December
- 20- Third international Ain Shams University Conference on production engineering and design for development , Cairo Egypt , 27-29 December 1990
- 21- Fourth international conference on production engineering and design for development , PEDD, Cairo, Egypt , 27- 29 December , 1993
- 22- 6th Cairo, university international conference on mechanical design and production , Cairo Egypt , 2-4 January , 1996
- 23- Sixth international conference on production engineering dosing and control , Alexandria , Egypt , 15-17 February



- 24- Fifth international conference on production engineering and design for development , PEDD 15 faculty of engineering Ain Shams university , Cairo , Egypt , 28-30 April , 1998.
- 25- Seventh international conference on production engineering design and control , Alexandria , Egypt , 26-27 February , 2001.
- 26- Sixth international conference on production engineering and design for development , PEDD 16 , Ain Shams university . 12-14 February , 2002.
- 27- 8th Cairo university conference on mechanical design and production , Cairo , Egypt , 4-6 January , 2004
- 28- 8th international conference on production engineering design and control (PEDC) Alexandria, Egypt 27-29 December , 2004
- 29- 7th international conference on production engineering and design for development , Cairo , Egypt 7-9 February , 2006.

6) بيان بالدوريات العلمية المفهرسة (المدرجة في قاعدة بيانات Scopus) التي قام المرشح بالتحكم فيها أو رئاسة تحريرها أو الاشتراك في أسرة التحرير.

الاشتراك في أسرة تحرير مجلة Schweissen & Schneiden العلمية بألمانيا الشرقية عام 1979 إلى 1989. بعدها انضمت المجلة إلى زميلتها لألمانيا الغربية بعد توحيد ألمانيا وانقطاع المراسلة.

## رابعاً: النشاط المجتمعي

1) المشروعات البحثية الممولة ذات المردود المجتمعي.

(مرفق نموذج ج).

2) المساهمة في تأسيس شعبة/قسم

3) تنفيذ برامج تدريب وتنمية موارد بشرية

4) المساهمة في حل مشكلات قومية

5) أنشطة أخرى لخدمة المجتمع

1) المشروعات البحثية الممولة ذات المردود المجتمعي. (مرفق نموذج أ).

| م | عنوان المشروع                                                    | الجهة الممولة          | الجهة المستفيدة | تاريخ تنفيذ المشروع | النكلفة الكلية | دور الباحث |
|---|------------------------------------------------------------------|------------------------|-----------------|---------------------|----------------|------------|
| 1 | Developing A Technology Education Curriculum for Egypt's Schools | المجلس الأعلى للجامعات | التعليم العام   | 1989-1991           | 200000 L.E.    | P.I.       |
| 2 | Design, Production and Testing of Solar Energy Water Heater      | المجلس الأعلى للجامعات | الطاقة المتجددة | 1984-1988           | 200000 L.E.    | P.I.       |

## (2) المساهمة في (تأسيس شعبة أو قسم أكاديمي).

- معامل الفلزات والمواد في هندسة عين شمس
- تأسيس معدات معامل كلية التعليم الصناعي
- تأسيس معامل وورش كلية الهندسة المستجدة – جامعة حلب بسوريا

### (3) تنفيذ برامج تدريب وتنمية موارد بشرية وتعليم مستمر تخدم المجتمع.

- تخريج ما لا يقل عن 23000 مهندس يعملون فى مجالات الإنتاج والتنمية الاقتصادية بعضهم ذو مراكز مرموقة.
- تخرج 24 من حملة الدكتوراه عدد كبير منهم فى مراكز مرموقة مثل وزير سابق - رئيس مجلس إدارة شركة السكر والتقطير المصرية وغيرهم كثير معظمهم حالياً أساتذة جامعات وعمداء فى القاهرة وعين شمس والمنيا وشبين الكوم والإسكندرية ويخرجون أجيالاً رائدة ورئيس الوزراء (شريف إسماعيل).
- الاستشارات العلمية والعملية لبعض الشركات مثل شركة السكر استفادة من تأهيل للمهندسين بالبحث والتطوير وتصنيع بعض المعدات مثل أسطوانات التشكيل وقطع الغيار لمدة عام كامل.
- تحقيق تدريس العلوم الهندسية والتكنولوجية باللغة القومية (اللغة العربية) شأننا فى ذلك شأن كافة دول العالم مع مصاحبة ذلك بالإنجليزية كتابة وترسيخ ذلك بإثراء المكتبة العربية بمؤلفات باللغة العربية ومترجمات إليها من الألمانية والإنجليزية فى مجالات التخصص المتسعة.
- تعزيز معامل القسم بمعدات هدية من جامعة برلين التقنية.
- الإسهام بالجزء الأكبر فى إصدار معجم الهندسة الميكانيكية الجزء الأول والجزء الثانى والاشتراك فى معجم الفيزياء الصادر 2011 ومعجم الحاسوب صدر عام 2012 وكلها فى عمل المرشح بمجمع اللغة العربية كعضو نشط.

4) أنشطة أخرى لخدمة المجتمع مثل : الإشتراك في مجالس إدارة أو لجان الجمعيات العلمية والمجالس القومية والدولية وغيرها.

- عضوية مجمع اللغة العربية 1995 حتى الآن.
- عضو المجلس القومى للإنتاج والشئون الاقتصادية 1995 حتى 2016.
- عضو المجلس القومى للتعليم والبحث العلمى 1995 حتى 2016 .
- عضو المجمع العلمى المصرى 1996 حتى الآن.
- عضو المجمع المصرى للثقافة العلمية.
- عضو جمعيات اللحام الأمريكية والألمانية والمصرية.
- عضو جمعية السباكة المصرية – جمعية المهندسين المصرية – عضو مجلس إدارة مركز بحوث وتطوير الفلزات سابقاً – عضو لجنة بحوث الصناعة بأكاديمية البحث العلمى والتكنولوجيا – وبعض الجمعيات الهندسية الأخرى سابقاً

# خامساً: مبررات الترشيح لجائزة النيل فى العلوم الهندسية

اسم المرشح: أ.د أحمد علي سالم الصباغ

الهيئة المرشحة: جامعة عين شمس – كلية الهندسة

تاريخ الميلاد : 1924/9/7

العنوان والتليفون: 5 شارع النادي 11341 مصر الجديدة

التليفونات 22906750 – 24175558

محمول 01223316445

نوع الجائزة: العلوم

مجال الجائزة: الهندسية

تاريخ الميلاد ومكانه: 1924/9/7 بيلا – كفر الشيخ

مبررات الترشيح:

- اثرى المراجع الهندسية بكم كبير من المترجمات (10 كتب و 7 اصول عمل) والمؤلفات (12 مؤلف) تمهيداً لتعريب الدراسة الهندسية لهذا القسم.
- من خلال عضوية مجمع اللغة العربية اصدر معجم الهندسة الميكانيكية الجزء الأول وسيصدر الجزء الثاني قريباً وساهم في معاجم المجمع في الحاسبات والفيزياء.
- تخريج مدرسة علمية متميزة من حملة الدكتوراه (24) و الماجستير (43) وتبوأ عدد كبير منهم مناصب متميزة في المجتمع المصري منهم رئيس الوزراء ورؤساء مجالس إدارات شركات مرموقة ورؤساء وعمداء كليات واساتذة جامعات ومهندسين في الصناعة.

رئيس مجلس قسم هندسة الانتاج والتصميم



## Curriculum Vitae

**Name** Tamer Elnady  
**Affiliation** Group for Advanced Research in Dynamic Systems (ASU-GARDS)  
Design and Production Engineering Department  
Faculty of Engineering, Ain Shams University  
**Interests** Duct Acoustics, Machine Noise Control, Room Acoustics and  
Measurement Techniques. Applications: Aircraft engines, Exhaust  
and intake systems, Ventilation systems, Standard Measurements.  
3D Scanning and Virtualization, Virtual Reality, Virtual Tours, e-  
Learning, online teaching and assessment.  
**Address** Center for Sound, Vibration and Smart Structures (CVS3),  
Faculty of Engineering, Ain Shams University,  
1 Elsarayat St., Abbaseya, 11517 Cairo, Egypt.  
**Phones** Work +20 2 2682 8114  
Mobile +20 122 310 1116  
**Email** [tamer.elnady@eng.asu.edu.eg](mailto:tamer.elnady@eng.asu.edu.eg)



### Employment

| Years                        | Institution                                                                               | Job Description                                                                                              |
|------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| January 2018<br>to date      | Ain Shams University, Faculty<br>of Engineering                                           | Vice Dean for Education and Student Affairs                                                                  |
| August 2017<br>to March 2018 | Ain Shams University, Faculty<br>of Engineering.                                          | Head of Design and Production Engineering Department                                                         |
| July 2016 to<br>date         | Ain Shams University, Faculty<br>of Engineering.                                          | Professor, Director of the Center for sound, vibration and<br>Smart Structures (CVS3).                       |
| Sep 2014<br>to date          | Egyptian Presidency                                                                       | Member of the Council of Advisors for the President in<br>Education and Scientific Research (Voluntary Work) |
| Sep 2013<br>to Jun 2015      | Ministry of Education                                                                     | Assistant Minister for Exploratory Centers for Science and<br>Technology (Part time).                        |
| June 2011<br>to June 2016    | Ain Shams University, Faculty<br>of Engineering.                                          | Associate Professor, Head of ASU Sound and Vibration<br>Laboratory.                                          |
| Oct 2004<br>to Apr 2011      | Ain Shams University, Faculty<br>of Engineering.                                          | Assistant Professor, Head of ASU Sound and Vibration<br>Laboratory.                                          |
| May 2000<br>to Sep 2004      | Royal Institute of Technology<br>(KTH), Aeronautical & Vehicle<br>Engineering Department. | Researcher and Ph.D. student.                                                                                |
| Sep 1997<br>to May 2000      | Ain Shams University, Faculty<br>of Engineering.                                          | Teaching and Research assistant.                                                                             |

### Education

| Year | Institution                                                                                                                                                                                        | Degree awarded, grade                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 2004 | Royal Institute of Technology (KTH) in Stockholm,<br>Aeronautical and Vehicle Engineering Department.<br>Thesis title: Modeling and Characterization of<br>Perforates in Lined Ducts and Mufflers. | Ph.D. in Technical Acoustics                                                            |
| 2002 | Royal Institute of Technology (KTH) in Stockholm,<br>Aeronautical and Vehicle Engineering Department.<br>Thesis title: On the Use of Liners to Reduce Aircraft<br>Jet Engine Noise.                | Licentiate in Technical Acoustics (A<br>Swedish degree corresponding to<br>half a Ph.D) |
| 2000 | Ain Shams University in Cairo, Faculty of<br>Engineering, Design and Production Engineering<br>Department. Thesis title: Reduction of Noise for<br>Industrial Machinery.                           | M.Sc. in Mechanical Engineering                                                         |

|      |                                                                                                                                                                       |                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1997 | Ain Shams University in Cairo, Faculty of Engineering, Design and Production Engineering Department. Project title: Design, Manufacturing and Testing of a Jib Crane. | B.Sc. in Mechanical Engineering.<br>Distinction with Honor.<br>(commutative: $4674/4950 = 94.4\%$ ) –<br>GPA=4 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|

#### **Other activities/positions:**

- Project Manager for the Fundamentals of Engineering Exam for Egyptian Engineers at the Egyptian Engineering Syndicate.
- Founder and President of the Acoustical Society of Egypt.
- A member of the EU ERASMUS+ National Higher Education Reform Expert team (the HERE – Egypt team).
- One of the developers of SIDLAB Software, a 1D simulation code for the propagation of sound waves inside ducts.
- Engineering Section Editor for the Bulletin of the National research Centre.
- Previous Member of the Board of Directors for the International Institute for Acoustics and Vibrations (IIAV).
- Member of the Editorial Board of “Advances of Acoustics and Vibration” Journal.
- Member of the Editorial Board of “SAE International Journal of Vehicle Noise and Vibration” Journal.
- Chair of the organizing committee of the 1st COMSOL Users Conference in the Arab Countries, Dhahran, 12-13 January, 2009.
- Member of the MEMEC EXPO International Advisory Committee, held regularly in Bahrain, 1<sup>st</sup> one held in 2007 and second one to be held in 2009.
- Member of the scientific committee International Conference on Advanced Materials for Application in Acoustics and Vibration (AMAAV), organized by the British University in Cairo, 4-6 Jan 2009.
- Reviewer at several international and national journals: The International Journal of Acoustics and Vibrations (IJAV), AIAA Journal, Applied Acoustics, Journal of Environmental Sciences.
- Chair of the local organizing committee of the 17<sup>th</sup> International Congress of Sound and Vibration (ICSV), 18-22 July 2010.
- Member of the technical committee at the Egyptian Ministry for Environmental Affairs, whose job is to revise the noise regulations in the Egyptian Law for Environment.
- Member of the technical committee at the Housing and Building Research Center (HBRC), whose job is to develop a new code for acoustics and vibrations in buildings.

#### **Awards**

1. Egyptian State Incentive Award in Engineering Sciences for 2010.

#### **Books**

1. T. Elnady 2009. Modeling and Characterization of Perforates in Lined Ducts and Mufflers. VDM-Publishing, Germany. ISBN: 978-3-639-15699-7
2. T. Elnady and H. Bodén 2007, Sound and Vibration. Edited a translated version of the Swedish Course Book “Ljud och Vibrationer”.

#### **Journal Publications**

1. M. Nashed, T. Elnady and M. Åbom, 2018. Modeling of duct acoustics in the high frequency range using two-ports, Applied Acoustics, Vol. 135, pp. 37-47.
2. M. Kani, A. Abosrea, A. Makni, M. Taktak, M. Chabaane, T. Elnady and M. Haddar, 2018. Acoustic performance evaluation for ducts containing porous media, Applied Acoustics, Available online doi:10.1016/j.apacoust.2018.08.002
3. A. Abdelaziz, A. Elsabbagh and T. Elnady, 2018. Testing and Validation of a Novel Segmented Wind Turbine Blade, Journal of Testing and Evaluation, Vol. 47 (5), doi:10.1520/JTE20170238
4. K. Morishima, M. Kuno, A. Nishio, N. Kitagawa, Y. Manabe, M. Moto, F. Takasaki, H. Fujii, K. Satoh, H. Kodama, K. Hayashi, S. Odaka, S. Procureur, D. Attié, S. Bouteille, D. Calvet, C. Filosa, P. Magnier, I. Mandjavidze, M. Riallot, B. Marini, P. Gable, Y. Date, M. Sugiura, Y. Elshayeb, T. Elnady, M. Ezzy, E. Guerriero, V. Steiger, N. Serikoff, J.-B. Mouret, B. Charlès, H. Helal and M. Tayoubi, 2017. Discovery of a big void in Khufu's pyramid by observation of cosmic-ray muons, Nature, Vol. 552, pp. 386-390

5. A. Abosrea, W. El-Sallamy, T. Osman and T. Elnady, 2017. Production cost development for commercial exhaust systems, *Ain Shams Engineering Journal*, Available online doi:10.1016/j.asej.2017.09.003
6. C. Othmani, M. Taktak, A. Zein, T. Hantati, N. Dauchezc, T. Elnady, T. Fakhfakh and M. Haddar, 2017. Acoustic characterization of a porous absorber based on recycled sugarcane wastes, *Applied Acoustics*, Vol. 120, pp. 90–97.
7. M. Farooqui, T. Elnady and W. Akl, 2016. Validation of low frequency noise attenuation using locally resonant patches, *Journal of the Acoustical Society of America*, Vol. 139(6), pp. 3267-3276.
8. M. Farooqui, T. Elnady and W. Akl, 2016. Sound attenuation in ducts using locally resonant periodic aluminum patches, *Journal of the Acoustical Society of America*, Vol. 139(6), pp. 3277-3287.
9. A. Okasha, T. Elnady and M. Åbom, 2016. Analysis of Pipeline Networks using Two-ports, *Applied Acoustics*, Vol. 109, pp. 44-53, doi: 10.1016/2016.02.008.
10. C. Othmani, A. Zein, T. Hantati, M. Taktak, T. Elnady, T. Fakhfakh and M. Haddar, 2016. Experimental and theoretical investigation of the acoustic performance of sugarcane wastes based material, *Applied Acoustics*, Vol. 109, pp. 90-96, doi: 10.1016/2016.02.005.
11. M. Farooqui, T. Elnady, R. Glav and T. Karlsson, 2015. Modeling and Characterization of a Novel Porous Metallic Foam Inside Ducts, *SAE International Journal of Materials and Manufacturing*, Vol. 8(3), pp. 937-945. doi: 10.4271/2015-01-2203
12. W. Elshahar and T. Elnady, 2015. Measurement and Simulation of Two-Inlet Single-Outlet Mufflers, *SAE International Journal of Passenger Cars– Mechanical Systems*, Vol. 8(3), 1026-1033. doi:10.4271/2015-01-2316.
13. C. Othmani, T. Hentati, M. Taktak, T. Elnady, T. Fakhfakh and M. Haddar, 2015. Effect of Liner Characteristics on the Acoustic Performance of Duct Systems, *Archives of Acoustics*, Vol. 40(1), pp. 117–127.
14. T. Elnady, M. Åbom and Y. Yang, 2014. Systematic Optimization of an Exhaust System to Meet Noise Radiation Criteria at Idle, *SAE International Journal of Passenger Cars– Mechanical Systems*, Vol. 7(3). doi:10.4271/2014-01-0006.
15. D. Herrin, X. Hua, Y. Zhang and T. Elnady, 2014. The Proper Use of Plane Wave Models for Muffler Design, *SAE International Journal of Passenger Cars– Mechanical Systems*, Vol. 7(3). doi:10.4271/2014-01-0016.
16. X. Hua, D.W. Herrin, T.W. Wu, and T. Elnady, 2013. Simulation of diesel particulate filters in large exhaust systems, *Applied Acoustics*, Vol. 74(12), pp 1326–1332.
17. T. Elnady, S. Elsaadany, and D. W. Herrin, 2011. Investigation of the Acoustic Performance of After Treatment Devices, *SAE International Journal of Passenger Cars– Mechanical Systems*, Vol. 4(2).
18. T. Elnady, S. Elsaadany, and M. Åbom, 2011. Flow and Pressure Drop Calculation using Two-ports, *ASME Journal of Vibration and Acoustics*, Vol. 133(4), pp 041016/1-8.
19. M. Ramadan, W. Akl, T. Elnady, and A. Elsabbagh, 2011. Finite Element Modeling of an Acoustic Cloak for Three Dimensional Flexible Shells with Structural Excitation. *Journal of Applied Physics A: Materials Science and Processing*, DOI 10.1007/s00339-011-6247-x.
20. T. Elnady, M. Åbom, and S. Allam, 2010. Modeling Perforated Tubes in Mufflers using Two-ports, *ASME Journal of Vibration and Acoustics*, Vol. 132(6).
21. T. Elnady, H. Bodén, and B. Elhadidi, 2009. Validation of an Inverse Semi-Analytical Technique to Educe Liner Impedance, *AIAA Journal*, Vol. 47(12).
22. T. Elnady, A. Elsabbagh, W Akl, V. Garcia-Chocano, D. Torrent, F. Cervera and J. Sanchez-Dehesa 2009. Quenching of acoustic bandgaps by flow noise, *Applied Physics Letters*, 94, 134104, April 2009.

### **Conference Publications**

1. M. Wagih, T. Elnady and M. Åbom, 2018. Effect of Reflections on HVAC Systems Power-Based Acoustic Simulation, Inter-Noise 2018, Chicago, USA, 26-29 August.
2. M. Wagih, T. Elnady and M. Åbom, 2018. Review of splitter silencer modeling techniques, Euro-Noise 2018, Crete, Greece, 28-31 June.
3. M. Gaber, T. Elnady and A. Elsabbagh, 2018. Sound Source Localization in 360 Degrees Using a Circular Microphone Array, Euro-Noise 2018, Crete, Greece, 28-31 June.
4. M. Farooqui, T. Elnady and M. Åbom, 2017. Investigation of the impedance of a micro-perforated plate with two-sided grazing flow, 173rd Meeting of the Acoustical Society of America, Boston MA, 25–29 June.
5. M. Wagih, T. Elnady and M. Åbom, 2017. Investigation of the effect of neglecting reflections in Power-based sound in ducts, 173rd Meeting of the Acoustical Society of America, Boston MA, 25–29 June.
6. A. Abosrea and T. Elnady, 2017. Measurement of Flow-Generated Noise inside Mufflers, SAE 2017 Noise and Vibration Conference and Exhibition, Grand Rapids, USA, 12-15 June.
7. M. Kani, M. Amine, A. Abosrea, M. Taktak, T. Elnady, M. Chabbane, M. Haddar, 2017. Performance acoustique des matériaux poreux localisés dans un conduit. 7ième Congrès International Conception et Modélisation des Systèmes Mécaniques CMSM'2017, Hammamet, Tunisie, 27-29 March.
8. A. Allam and T. Elnady, 2016. Characterization of Mufflers, ICA 2016, Buenos Aires, Argentina, September 5-9.
9. M. Farooqui, T. Elnady and M. Åbom, 2016. Measurement of Perforate Impedance with grazing flow on both Sides, 22<sup>nd</sup> AIAA/CEAS Aeroacoustics Conference, Lyon, France, May 30 – June 1.
10. A. Abosrea, T. Elnady and W. Elsallamy, 2015. Flow generated noise inside mufflers, Inter-Noise 2015, San Francisco, USA, August 9-12.
11. M. Wagih and T. Elnady, 2015. Modeling industrial mufflers using two-ports, Inter-Noise 2015, San Francisco, USA, August 9-12.
12. A. Zein, T. Elnady, A. Elsabbagh and Hans Bodén, 2015. E-Laboratories for Sound and Vibration Education, 22<sup>nd</sup> International Congress on Sound and Vibration (ICSV), Florence, Italy, July 12-16.
13. A. Abdulaziz, A. Elsabbagh and T. Elnady, 2015. Using Acoustic Emission in validating a new design and manufacturing concepts of a horizontal axis wind turbine blade, 22<sup>nd</sup> International Congress on Sound and Vibration (ICSV), Florence, Italy, July 12-16.
14. M. Farooqui, T. Elnady, R. Glav and T. Karlsson, 2015. Modeling and Characterization of a Novel Porous Metallic Foam Inside Ducts, SAE 2015 Noise and Vibration Conference and Exhibition, Grand Rapids, USA, 23-25 June.
15. W. Elsahar and T. Elnady, 2015. Measurement and Simulation of Two-Inlet Single-Outlet Mufflers, SAE 2015 Noise and Vibration Conference and Exhibition, Grand Rapids, USA, 23-25 June.
16. M. Farooqui, T. Elnady and W. Akl, 2015. Low Frequency noise attenuation inside ducts using locally resonant periodic flush mounted steel patches, EuroNoise 2015, 31 May - 3 June, Maastricht.
17. E. Zidan, T. Elnady and A. Elsabbagh, 2014. Comparison of Sound Power Prediction Models of Wind Turbines, Proceedings of the International Conference on Advances in Agricultural, Biological & Environmental Sciences (AABES-2014), Dubai, UAE, Oct 15-16, pp. 67-73.
18. M. Wagih, T. Elnady, and M. Åbom, 2014. Analysis of Flow and Sound Propagation in HVAC Ducts Using Two-Ports, ASHRAE Summer Conference, Seattle, USA, June 28 – July 2.
19. L. Zhou, H. Bodén, C. Lahiri, F. Bake, L. Enghardt, S. Busse-Gerstengarbe and T. Elnady, 2014. Comparison of impedance eduction results using different methods and test rigs, AIAA Aviation and Aeronautics Forum and Exposition 2014, Atlanta, USA, June 16-20.
20. R. Kabral, L. Zhou, H. Bodén and T. Elnady, 2014. Determination of liner impedance under high temperature and grazing flow conditions, AIAA Aviation and Aeronautics Forum and Exposition 2014, Atlanta, USA, June 16-20.

21. T. Elnady, M. Åbom, and Y. Yang, 2014. Systematic Optimization of an Exhaust System to Meet Noise Radiation Criteria at Idle, SAE 2014 World Congress and Exhibition, Detroit, USA, April 8-10.
22. D.W. Herrin, X. Hua, Y. Zhang, and T. Elnady, 2014. The Proper Use of Plane Wave Models for Muffler Design, SAE 2014 World Congress and Exhibition, Detroit, USA, April 8-10.
23. W. Elsahar, T. Elnady, and M. Åbom, 2013. Validation of two-port temperature models for heat dissipation in exhaust systems, 166th Meeting of the Acoustical Society of America, San Francisco, December 2-6.
24. M. Farouqui, W. Akl, and T. Elnady, 2013. Sound attenuation in ducts using locally resonant periodic flush mounted flexible silicon aerogel patches, 166th Meeting of the Acoustical Society of America, San Francisco, December 2-6.
25. M. Wagih, T. Elnady, and M. Åbom, 2013. Analysis of duct networks at high frequencies using two-ports, Inter-Noise 2013, Innsbruck, Austria, September 16-18.
26. A. Okasha, T. Elnady, and M. Åbom, 2013. Acoustic response analysis of pipeline networks using two-ports, Inter-Noise 2013, Innsbruck, Austria, September 16-18.
27. T. Elnady, W. Elsahar, and M. Åbom, 2012. Estimation of temperature drop in exhaust systems, Inter-Noise 2012, New York, USA, August 19-22.
28. W. Elsahar, T. Elnady, and D. Herrin, 2012. Modeling DPF units beyond the plane wave range, Inter-Noise 2012, New York, USA, August 19-22.
29. X. Hua, D. Herrin, T. Wu, and T. Elnady, 2012. Simulation of diesel particulate filters in large exhaust systems, Inter-Noise 2012, New York, USA, August 19-22.
30. S. Elsaadany, T. Elnady, M. Åbom, and S. Boij, 2011. Optimization of Exhaust Systems to Meet the Acoustic Regulations and the Engine Specifications, 18th International Congress on Sound and Vibration, Rio de Janeiro, Brazil, July 10-14.
31. T. Elnady, S. Elsaadany, and D. W. Herrin, 2011. Investigation of the Acoustic Performance of After Treatment Devices, SAE 2011 Noise and Vibration Conference and Exhibition, Grand Rapid, USA, May 2011.
32. X. Hua, J. Liu, D. W. Herrin, and T. Elnady, 2011. Numerical Simulation of Diesel Particulate Filters in Exhaust Systems, SAE 2011 Noise and Vibration Conference and Exhibition, Grand Rapid, USA, May 2011.
33. W. Akl, T. Elnady, A. Elsabbagh, and M. Ramadan, 2010. Improving acoustic cloak bandwidth using nonlinear coordinate transformations, 17th International Congress on Sound and Vibration, Cairo, Egypt, July 18-22.
34. A. Elsaabagh, T. Elnady, and W. Akl, 2010. Using Virtual Reality Environment in the Teaching of Acoustics, 17th International Congress on Sound and Vibration, Cairo, Egypt, July 18-22.
35. T. Elnady, M. Åbom, and S. Elsaadany, 2010. Acoustic Response Analysis of Oil & Gas Pipeline Networks to Prevent their Fatigue and Failure, 17th International Congress on Sound and Vibration, Cairo, Egypt, July 18-22.
36. S. Elsaadany, T. Elnady, M. Åbom, and S. Boij, 2010. Insight into Exhaust Systems Optimization Techniques, 17th International Congress on Sound and Vibration, Cairo, Egypt, July 18-22.
37. O. Mohammady, G. El-Bayoumi, M. Bayoumi, B. Elhadidi, and T. Elnady, 2010. Analysis, Design, and Implementation of a Sound Tracking System to Track a Moving Object, 17th International Congress on Sound and Vibration, Cairo, Egypt, July 18-22.
38. T. Elnady, W. Akl, A. Elsabbagh, O. Mohammady, and Hans Bodén, 2010. Flat Sensors for Acoustic Pressure Measurements. 16<sup>th</sup> AIAA/CEAs Aeroacoustics Conference, Stockholm, Sweden, June 7-9.
39. M. Ramadan, W. Akl, T. Elnady, and A. Elsabbagh, 2010. Finite Element Modeling of an Acoustic Cloak for Three Dimensional Flexible Shells with Structural Excitation. International Conference on Metamaterials, Photonic crystals and Plasmonics, Cairo, Egypt, February 22-25.
40. T. Elnady, S. Elsaadany, and M. Åbom, 2009. Investigation into Modeling of Multi-Perforated Mufflers, 16th International Congress on Sound and Vibration, Krakow, Poland, July 6-9.

41. T. Elnady, 2009. Operational Modal Analysis of Ramses II Statue, International Operational Modal Analysis Conference IOMAC, Ancona, Italy, May 2-4.
42. A. Kamal, T. Elnady, and A. Yones, 2009. Parametric Study of Sound Attenuators for Industrial Fans, BUE Conference on Advanced Materials for Application in Acoustics and Vibration (AMAAV), Cairo, Egypt, January 4-6.
43. W. El-Sallamy, T. Elnady, W. Akl, and T. Osman, 2009. Investigation of Active Noise Control in Ducts, BUE Conference on Advanced Materials for Application in Acoustics and Vibration (AMAAV), Cairo, Egypt, January 4-6.
44. W. El-Sallamy, T. Elnady, T. Osman, and A. Khattab, 2009. Active Noise Control in Flow Ducts, BUE Conference on Advanced Materials for Application in Acoustics and Vibration (AMAAV), Cairo, Egypt, January 4-6.
45. T. Elnady, S. Elsaadany, and M. Åbom, 2008. Flow and Pressure Drop Calculation using two-ports, 15<sup>th</sup> International Congress on Sound and Vibration, Daejeon, Korea, July 6-10.
46. T. Elnady, 2007. A Platform to Measure Transmission Loss of Mufflers with Flow, Inter-Noise 2007, Istanbul, Turkey, August 28-31.
47. T. Elnady, 2007. Vibration Measurements during the Relocation of Ramses II Statue, Inter-Noise 2007, Istanbul, Turkey, August 28-31.
48. T. Elnady and H. Bodén, 2007. A Tempus experience: New Curriculum in Sound and Vibration Control in Egypt. 14<sup>th</sup> International Congress on Sound and Vibration, Cairns, Australia, July 9-12.
49. T. Elnady and M. Åbom, 2006. SIDLAB: new 1D sound propagation simulation software for complex duct networks, 13<sup>th</sup> International Congress on Sound and Vibration, Vienna, Austria, July 2-6.
50. Y. Elnemr and T. Elnady, 2006. Design, construction, and validation of a reverberation room, 13<sup>th</sup> International Congress on Sound and Vibration, Vienna, Austria, July 2-6.
51. R. Fairbrother, M. Åbom, T. Elnady, F. Ollivier, 2006. Linear acoustic simulation and experimental characterization of a modular automotive muffler, 13<sup>th</sup> International Congress on Sound and Vibration, Vienna, Austria, July 2-6.
52. T. Elnady, M. Musharrof, H. Bodén, B. Elhadidi, 2006. Validation of an Inverse Analytical Technique to Educe Liner Impedance with Grazing Flow, 12<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Cambridge, MA, May 8-10, 2006-2639.
53. S. Tawfik, and T. Elnady, 2006. Arabic computer-based remediation program, a new development: Acoustic Manipulation, Central Auditory Processing Disorder "From Theory to Clinical Practice", Marriott Hotel, Cairo, March 25-26.
54. T. Elnady and M. Åbom, 2005. Modeling perforates in mufflers using two-ports, 12<sup>th</sup> International Congress on Sound and Vibration, Lisbon, Portugal, July. 11-14.
55. T. Elnady and H. Bodén, 2004. Direct Calculation of Liner Impedance from its Indirect Measurement, 11<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Monterey, CA, May 23-25.
56. T. Elnady, 2005. Investigation of Mode Scattering by Hard Strips in Lined Ducts Using Collocation, Eleventh International Conference on Aerospace Sciences and Aviation Technology, Military Technical College, Cairo, May 17-19.
57. T. Elnady, 2005. Acoustic Network Models for Perforated Tube Mufflers, First Ain Shams International Conference on Environmental Engineering, Cairo, April 9-11.
58. T. Elnady and H. Bodén, 2004. An Inverse Analytical Method for Extracting Liner Impedance from Pressure Measurements. 10<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Manchester, UK, May 10-12, 2004-2836.
59. T. Elnady, H. Bodén and T. Kontio, 2004. Impedance of SDOF liners at high temperatures, 10<sup>th</sup> AIAA/CEAS Aeroacoustics Conference, Manchester, UK, May 10-12, 2004-2842.
60. T. Elnady and H. Bodén, 2003. Mode Scattering by Hard Strips in Lined ducts. 10<sup>th</sup> International Congress on Sound and Vibration, Stockholm, Sweden, July. 7-10.

61. T. Elnady and H. Bodén, 2003. On semi-empirical liner impedance modeling with grazing flow. 9<sup>th</sup> AIAA/CEAS Aeroacoustic Conference, Hilton Head, SC, USA, May 12-14, 2003-3304.
62. T. Elnady and H. Bodén, 2002. Hard strips in lined ducts, 8<sup>th</sup> AIAA/CEAS Aeroacoustic Conference, Breckenridge, CO, USA, Jul. 17-19, 2002-2444.
63. T. Elnady, 2002. Impedance modeling of acoustic liners, Sixth International Conference on Production Engineering and Design for Development (PEDD-6), Cairo, Egypt, Feb. 12-14.
64. T. Elnady and H. Bodén, 2001. Application of the point matching method to model circumferentially segmented non-locally reacting liners, 7<sup>th</sup> AIAA/CEAS Aeroacoustic Conference, Maastricht, The Netherlands, May. 28-30, 2001-2202.
65. T. Elnady, 2000. Noise Assessment in Egyptian Airports, Year 2000 International Airport Noise Symposium, San Diego, CA, USA, Feb. 14-16.

#### **Academic and Research Projects**

| <b>Year</b> | <b>Funding Agency</b>                    | <b>Project Description</b>                                                                                                                                        |
|-------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018        | European Commission                      | Erasmus+ ASRP: Academic System Resource Planning: A Fully-Automated Smart Campus.                                                                                 |
| 2018        | European Commission                      | Erasmus+ BIT: Building Information Technology University Requirements for Egyptian Higher Education Graduates                                                     |
| 2017        | European Commission                      | Erasmus+ eProfEng: Innovative Lifelong e-Learning for Professional Engineers                                                                                      |
| 2017        | European Commission                      | Erasmus+ IMPAQT: Integrative Multidisciplinary People-centered Architectural Qualification & Training                                                             |
| 2017        | European Commission                      | Erasmus+ PACES: Progression of Accessibility Centres in higher Education for Students with disabilities in North Africa                                           |
| 2017        | European Commission                      | Erasmus+ WESET: Wind Engineering Skills in Egypt and Tunisia                                                                                                      |
| 2017        | Egyptian Academy for Scientific Research | 1 year project titled: ICT Framework to enhance Egypt as a Touristic destination (ICT FET)                                                                        |
| 2016        | European Commission                      | Erasmus+ EduMUST: 3 years project on Education and Capacity Building in Museum Studies                                                                            |
| 2016        | European Commission                      | Erasmus+ SP-EDU: International E-based Diploma and Professional Certificates in Special Education and Inclusion                                                   |
| 2016        | European Commission                      | Erasmus+ VET-ENG: Blended Vocational-Engineering-Industry Shared Learning Environment for Stream of Socially- and Technically-Competent Technicians and Engineers |
| 2016        | Science and Technology Development Fund  | Acoustic design of heating, ventilation and air conditioning (HVAC) systems                                                                                       |
| 2016        | Egyptian Academy for Scientific Research | 1 year project titled: Development of Communication Facilities to Support Search and Rescue by the Roads                                                          |
| 2015        | European Commission                      | Erasmus+ eSTEM: 3 years project on International Diploma for School Teachers in STEM Education                                                                    |
| 2015        | European Commission                      | Erasmus+ ITCT: 3 projects on IT-Based International Diploma and Professional Certificate in Clinical Toxicology                                                   |
| 2015        | European Commission                      | Erasmus+ BEMT: 3 years project on Integrating Blended Entrepreneurial and Manufacturing Technology Competency into Socioeconomic Development in Egypt             |

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|------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2015 | European Commission                                          | Eramsus+ SEM-SEM: 3 years project on Smart Control Systems for Energy Management: New Master Degree                                                                                                                             |
| 2015 | Egyptian Academy for Scientific Research                     | 1 year project titled: Control of sound recording inside studios                                                                                                                                                                |
| 2015 | STDF-British Council (Newton-Mosharafa, Institutional Links) | Presence in the Past: Preservation of Egyptian maritime archaeological sites through 3D digital modelling and Virtual Reality presentation in the laboratory for modern day exploration of lost heritage                        |
| 2014 | EU-Egypt Innovation Fund (RDI)                               | 1.5 years project titled: e-Laboratories for Chemistry Education                                                                                                                                                                |
| 2013 | European Commission                                          | Tempus-AIP: 3 year project on Academic-Industry Partnership towards Development of Trainers and Educators for Technicians in Egypt.                                                                                             |
| 2012 | Science and Technology Development Fund                      | Capacity Building Grant: 1 year project to establish a Research Center for Acoustics, Vibration and Smart Structures.                                                                                                           |
| 2012 | European Commission                                          | Tempus-VirCult: 3 year project on Using Virtual Reality in Cultural Heritage Education.                                                                                                                                         |
| 2012 | Egyptian Academy for Scientific Research                     | 2 years cooperation project with National Engineering School of Sfax, Tunisia. Acoustical characterization of acoustic liner materials from agriculture wastes.                                                                 |
| 2011 | European Commission (FP7)                                    | FlowAirS: 4 year Marie Curie Initial Training Network (ITN) on Silent Air Flows in transport, buildings, and power generation.                                                                                                  |
| 2011 | European Commission                                          | Tempus-eLab: 3 year project on the development of e-Laboratories for Physics and Engineering Education.                                                                                                                         |
| 2011 | European Commission                                          | Tempus-CERES: 3 year project on Clean Energy and Research in Environmental Studies                                                                                                                                              |
| 2010 | Information Technology Industry Development Agency (ITIDA)   | 18 months project titled: Prototyping Metamaterial Antennas                                                                                                                                                                     |
| 2010 | European Commission                                          | Tempus-AES: 3 year project on the development of new curricula for Advanced Engineering Systems, and Bridging the Gap between Academia and Industry                                                                             |
| 2010 | European Commission (FP7)                                    | 4 years project titled: X-Noise EV. This is a continuation of the FP6 project X3-Noise which is a Network of Excellence.                                                                                                        |
| 2010 | Science and Technology Development Fund                      | 3 years project titled: Innovative Techniques for Design and Manufacturing of Wind Turbine Blades. The study covers a new technique to manufacture wind turbine blades and its effect on flutter and acoustics.                 |
| 2009 | EU-Egypt Innovation Fund (RDI)                               | 1.5 years project with KTH and others titled: Acoustic Response Analysis of Oil & Gas Pipeline Networks to Prevent their Fatigue and Failure                                                                                    |
| 2009 | US-Egypt Joint Research Grants                               | 2 year project with the University of Kentucky. Simulation of Diesel Particulate Filters in Exhaust Systems                                                                                                                     |
| 2009 | Spanish Agency for Intl. Cooperation                         | 1 year project with the University of Madrid. Modeling and Optimization of Thermo Acoustic Heat Engine.                                                                                                                         |
| 2009 | Swedish Research Council                                     | Swedish Research Links: 3 year Project. Simulation of High Frequency Sound in Ducts                                                                                                                                             |
| 2009 | European Commission                                          | Tempus-MSV: 3 year project. Development of a Masters of Engineering Program in Sound and Vibration                                                                                                                              |
| 2009 | European Commission (FP7)                                    | 4 years project titled: Optimization for low Environmental Noise impact AIRcraft (OPENAIR). A large project with 47 partners from all over Europe. Ain Shams University role is to develop and characterize a new paint sensor. |
| 2008 | Spanish Agency for Intl. Cooperation                         | 1 year project with the University of Valencia. Acoustic Control using Phononic Crystals                                                                                                                                        |



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|------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2007 | European Commission                         | Tempus-VRLab: 3 year project. Using Virtual Reality in Engineering Education. Establishment of the first Virtual Reality Lab in Egypt.                                                                                                                                                                                                            |
| 2006 | European Commission (FP6)                   | X3-Noise: 4 year project. Aircraft External Noise Research Network and Coordination. The ASU Sound & Vibration Lab is the Regional Focal Point for this network in the Arab-Mediterranean Countries.                                                                                                                                              |
| 2006 | Swedish Research Council                    | Swedish Research Links: 3 year Project. Reduction of noise using microperforates.                                                                                                                                                                                                                                                                 |
| 2004 | European Commission                         | Tempus-SvibCon: 3 year project. The coordinator. Development of new curricula for sound and vibration control at Ain Shams University with cooperation with the Royal Institute of Technology in Stockholm and the Institute of Sound and Vibration Research in Southampton. Establishment of the first Acoustics Lab. in an Egyptian University. |
| 2003 | Swedish Research Council                    | Swedish Research Links: 3 year Project. Reduction of Aircraft Jet Engine Noise Using Liners.                                                                                                                                                                                                                                                      |
| 2003 | European Commission (FP6)                   | ARTEMIS: 3 year Project. Modeling of inlet/outlet noise from turbo-charged diesel engines. Modeling of a complicated Renault Laguna perforated silencer.                                                                                                                                                                                          |
| 2000 | Swedish Defense Material Administration FMV | NFFP: 3 year Project. Hot stream acoustic liners.                                                                                                                                                                                                                                                                                                 |
| 2000 | European Commission (FP5)                   | DUCAT: 3 year Project. Basic research on duct acoustics and radiation. Modeling of non-locally reacting liners and added a model for spliced liners.                                                                                                                                                                                              |

#### **Engineering Services Projects**

| <b>Year</b> | <b>Customer</b>                                        | <b>Project Description</b>                                                                                                                  |
|-------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 2018        | Honeywell, USA                                         | Design, manufacturing and commissioning of a test rig for the measurement of muffler performance with Flow.                                 |
| 2018        | Engineering Consultants Group (ECG), Egypt             | Measurements and Treatments Recommendation Services for Eldyar Elqatarya Building.                                                          |
| 2018        | Distance Studio Consultants (DSC), Egypt               | Acoustic Design and Treatments Recommendation Services for Mivida School Project.                                                           |
| 2018        | Trinity Environmental Consultancy International, Qatar | Noise Modelling of Transfer Pumping station project-Qatar.                                                                                  |
| 2018        | MANTRAC Group, Egypt                                   | Designing a Soundproof Enclosure for two models of generators.                                                                              |
| 2018        | UNILEVER, Egypt                                        | Sound and Vibration Design of Packaging Area at Lipton Factory.                                                                             |
| 2018        | Engineering Consultants Group (ECG)                    | Noise modelling for the Ayoun Moussa USC Coal-fired Power Plant.                                                                            |
| 2017        | ScanPyramids                                           | 3D scanning and virtualization of the inner corridors inside Khufu Pyramid, leading to the discovery of a bug void above the grand gallery. |
| 2017        | Siemens Elsewedy Electric                              | Noise Impact Assessment Beni Suef Combined Cycle Power Plant.                                                                               |
| 2017        | UNii Engineering Consultancy, Qatar                    | Noise Impact Assessment for an Exhibition Hall for Islamic culture Heritage for the General Directorate of Endowments in Qatar.             |
| 2017        | Yara Marine Technologies AB, Sweden                    | Acoustic analysis of 3 CAT filters                                                                                                          |

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|------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2016 | FAW, China                                    | Design, manufacturing and commissioning of a test rig for the measurement of muffler performance with Flow.                                                              |
| 2016 | SAIC, China                                   | Design, manufacturing and commissioning of a test rig for the measurement of muffler performance with Flow.                                                              |
| 2016 | Engineering Consultants Group (ECG)           | Noise baseline measurements for a number of Power Plants in Egypt, Damietta, Assiut, and Qena.                                                                           |
| 2016 | Actglobe, Egypt                               | Acoustics consultation measurements for chiller units of a commercial mall in Marsilia compound                                                                          |
| 2016 | CSI-Egypt                                     | Acoustic study for PAGA system of Zohr project                                                                                                                           |
| 2016 | Trinity Environmental Consultancy, Qatar      | Noise Impact Assessment for Zekreer Phase-1 plant at Ras Lafan, Qatar.                                                                                                   |
| 2015 | Mantrac, Egypt                                | Structural Design of an Engine-Alternator skid for power generation.                                                                                                     |
| 2015 | Raafat Miller Consulting                      | Acoustic Design and Treatments Recommendation Services for New National Cancer Institute Foundation "NNCIF" Project (Hospital 500500), Sheikh Zayed City, Egypt          |
| 2015 | Ain Shams University                          | Noise mapping for ElZaafarana wind turbine farm.                                                                                                                         |
| 2015 | Orascom Construction                          | Thermal and Acoustics Re-design for some spaces inside the Grand Egyptian Museum.                                                                                        |
| 2014 | Umfotec, Germany                              | Design, manufacturing and commissioning of a test rig for the measurement of muffler performance with Flow.                                                              |
| 2014 | Mantrac, Egypt                                | Structural Design of an Enclosure Shelter for Diesel Generator                                                                                                           |
| 2013 | TJFAW, China                                  | Design optimization of a passenger car exhaust system.                                                                                                                   |
| 2013 | Khafji Joint Operations, Saudi Arabia         | KJO Noise Survey Program. Development of an Environmental Noise Division at KJO, noise survey and measurements for the whole site including on and off-shore facilities. |
| 2012 | Petrofac, UAE                                 | Noise modeling and Noise study report for central processing facilities Phase I for Badra oil field, Iraq.                                                               |
| 2012 | Barloworld Equipment, Namibia                 | Noise measurements and control for Anixas 22 MW Diesel Power Station, Walves Bay, Namibia                                                                                |
| 2012 | Mantrac, Egypt                                | Structural Design of an engine skid for Oil pump in Tazama, Tanzania.                                                                                                    |
| 2011 | Dolphin Power, Qatar                          | Validation of a Public Address / General Alarm System in a Tank farm                                                                                                     |
| 2010 | Environmental Consulting Bureau, Saudi Arabia | Noise Impact Assessment for Saudi Aramco Jubail Export Refinery                                                                                                          |
| 2010 | Qatar Construction Company QCON               | Troubleshooting an existing Public Address / General Alarm System in a Tank farm                                                                                         |
| 2010 | Ozone Intl., UAE                              | Noise Mapping of Alsawah Island, Abu Dhabi                                                                                                                               |
| 2009 | General Electric, France                      | Propose and analyze new noise control solutions for Gas Turbines.                                                                                                        |
| 2009 | Wärtsilä, Finland                             | Modeling of Selective Catalytic Reducer (SCR) Systems.                                                                                                                   |
| 2009 | Ministry of Foreign Affairs, Saudi Arabia     | Measurement of Sound Power of Fan Coil Units to be installed in the new building for the Saudi Embassy in Cairo                                                          |
| 2009 | Japan International Cooperation Agency        | Noise impact study for underground Line number 4 in Greater Cairo.                                                                                                       |
| 2009 | Egyptian Airport Co.                          | Selection of Noise monitoring Terminals locations around Hurgada Airport                                                                                                 |
| 2009 | Saudi Aramco                                  | Study of the mechanical stresses for sleeve pipes used to surround corroded parts of oil pipelines.                                                                      |
| 2009 | Materials Laboratory in Dubai                 | Design of Advanced system to measure measure Sound Reduction Index of Building Materials according to ASTM E90.                                                          |

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|------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2009 | Qatar Construction Company QCON          | Design of Public Address / General Alarm System for Common Low Sulphur Condensate Storage & Export Facilities.                                                                                                      |
| 2008 | Environics                               | Noise Impact Assessment for El-Ezz Steel Plants at Ein Elsokhna.                                                                                                                                                    |
| 2008 | Environics                               | Noise Impact Assessment for Abu Dabbab Mine at Safaga.                                                                                                                                                              |
| 2008 | Saudi Aramco                             | Conduct a parametric study using Finite Element Analysis of the variation the electrical impedance between 2 electrodes surrounded by fluids within a range of (Resistivity, fluid velocity, frequency) parameters. |
| 2008 | Safeer Hotel                             | Noise Control of Air Conditioning Chillers on top of the building.                                                                                                                                                  |
| 2008 | Caterpillar Technical Center, USA        | Manufacturing and validation of muffler test rig elements. Measurements of acoustic properties of selected muffler elements.                                                                                        |
| 2008 | Wärtsilä, Finland                        | Research and Development of a new theory for the prediction of the acoustic properties of big resistive mufflers.                                                                                                   |
| 2008 | Environex                                | Noise Impact Assessment for a Refinery at Ein Elsokhna.                                                                                                                                                             |
| 2007 | Materials Laboratory in Dubai            | Design, implementation and personnel training for a system to measure Sound Reduction Index of Building Materials according to ASTM E90.                                                                            |
| 2007 | Wärtsilä, Finland                        | Development of a software for the design of Diesel Engine exhaust systems installed on ships.                                                                                                                       |
| 2007 | Egyptian Company for Potable Water       | Study on the noise control of the main pumping plant at Rod Elfarag (8 Pumps, each 1750 kW).                                                                                                                        |
| 2007 | Egat Factory                             | Measurement of Sound Power of fan coil units according to ISO 3744                                                                                                                                                  |
| 2007 | Cairo Airport Authority                  | Environmental Impact Assessment during the construction works of the new runway at Cairo International Airport.                                                                                                     |
| 2006 | Supreme Council for Antiquities in Egypt | Vibration measurements and monitoring during the project of relocation of Ramses II statue (weight = 83 tons, height = 12 m).                                                                                       |
| 2006 | Procter & Gamble – Egypt                 | Noise control in the packing area.                                                                                                                                                                                  |
| 2006 | Caterpillar Technical Center, USA        | Muffler Design and Measurement.                                                                                                                                                                                     |
| 2005 | Audiology Unit, ASU                      | Acoustic Manipulation within the development of a computer software for Language Learning Impaired Children.                                                                                                        |
| 2005 | Swenox AB, Sweden                        | Development of a Matlab Toolbox for the design of exhaust systems.                                                                                                                                                  |
| 1999 | Becktel Co.                              | Environmental Noise Assessment in Sidi Krer Power Generation Plant.                                                                                                                                                 |
| 1999 | Egyptian Civil Aviation Authority        | Noise pollution assessment for International Airports in Egypt. (Aswan, Sharm Elsheikh, Elnozha and Taba International Airports)                                                                                    |
| 1998 | KasemTex Co.                             | Vibration damping for textile machines located on the second floor of a concrete building.                                                                                                                          |
| 1998 | Ministry of the Environment EGY          | Evaluation of the environmental consequences and effect on urban life of Sinbad Funfair.                                                                                                                            |
| 1998 | National Gas Company.                    | Evaluation of the environmental consequences and effect on urban life of a natural gas pressure-reduction station while it is being built.                                                                          |
| 1997 | Shlumberger Logelco Inc.                 | Design, manufacture and testing of a vibration-free rack mounted on trucks for the transportation of some electronic tools.                                                                                         |

#### **Engineering Projects in Mechanical Design**

| <b>Year</b> | <b>Customer</b>                                     | <b>Project Description</b>                                                                           |
|-------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 2004        | Arab Contractors                                    | Design of Ramsis II statue transporter. Member of the design team.                                   |
| 1999        | Egyptian Authority for Monitoring Exports & Imports | Performing regular measurements on some imported Automotive spare parts.                             |
| 1998        | A small Casting Factory.                            | Design, manufacture and testing of a tilting mechanism of a rotary melting furnace and its fixation. |
| 1998        | Philips Company                                     | Reverse engineering for some spare parts.                                                            |

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|------|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 1997 | Cairo Bank           | Participated in evaluation of an induction furnace and a continuous casting machine.                                             |
| 1997 | Nile Contractors Co. | Design, manufacture and testing of a mechanism to raise a railway bridge (weight = 170 ton, span = 34 m).                        |
| 1997 | Egyptian Army        | Installation of an overhead crane (capacity = 10 ton, span = 12 m).                                                              |
| 1997 | Graduation Project.  | Design, manufacture and testing of a material handling equipment (Jib crane: capacity = 0.5 ton, height = 4.5 m, reach = 4.5 m). |
| 1995 | Student Project      | Design and manufacture of a centrifugal pump for irrigation.                                                                     |

#### **Teaching the Following Academic Courses**

| <b>Years</b> | <b>Course</b>                    | <b>Students</b>                            |
|--------------|----------------------------------|--------------------------------------------|
| 2007-        | Acoustics                        | 4 <sup>th</sup> Year Mechanical Power      |
| 2007-        | Acoustics                        | 3 <sup>rd</sup> Year Design and Production |
| 2007-09      | Mechatronics Machine Design      | 3 <sup>rd</sup> Year Mechatronics          |
| 2006-        | Systems' Modeling and Simulation | 3 <sup>rd</sup> Year Mechatronics          |
| 2004-        | Machine Design                   | 2 <sup>nd</sup> Year Mechanical            |
| 2004-06      | Mechanical Vibrations            | 3 <sup>rd</sup> Year Mechanical Power      |

#### **Organized Workshops and Other Scientific Events:**

| <b>Date</b>         | <b>Event</b>                                                                                                                                           |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15 Dec 2014         | e-Learning to Support Education in Egypt. Smart Innovative Solutions: e-Laboratories, Cairo.                                                           |
| 31 Nov 2014         | Progress Meeting for FP7 ITN Project: Silent Air Flows in transport, buildings, and power generation (FlowAirS).                                       |
| 29-30 Nov 2014      | International Workshop on Acoustics and Vibration in Egypt (IWAVE2014) [The Tenth Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.   |
| 19 Sep 2013         | Exhaust/Intake Systems for General Aviation Applications, Innsbruck, Austria.                                                                          |
| 13-14 Oct 2012      | International Workshop on Acoustics and Vibration in Egypt (IWAVE2012) [The Ninth Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.   |
| 22-23 Oct 2011      | International Workshop on Acoustics and Vibration in Egypt (IWAVE2011) [The Eighth Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.  |
| 18-22 Jul 2010      | The 17 <sup>th</sup> International Congress in Sound and Vibration (ICSV17), Cairo.                                                                    |
| 24-25 Oct 2009      | International Workshop on Acoustics and Vibration in Egypt (IWAVE2009) [The Seventh Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo. |
| 26-27 Jan 2009      | 1 <sup>st</sup> COMSOL Users Conference in the Arab Countries, Dhahran, Saudi Arabia.                                                                  |
| 11-12 Oct 2008      | International Workshop on Acoustics and Vibration in Egypt (IWAVE2008) [The Sixth Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.   |
| 8-9 Sep 2007        | International Workshop on Acoustics and Vibration in Egypt (IWAVE2007) [The Fifth Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.   |
| 4-5 Nov 2006        | International Workshop on Acoustics and Vibration in Egypt (IWAVE2006) [The Fourth Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.  |
| 30 Sep – 1 Oct 2005 | International Workshop on Acoustics and Vibration in Egypt (IWAVE2005) [The Third Swedish-Egyptian Workshop in Sound and Vibration Research], Cairo.   |
| 27-29 Nov 2004      | The Second Swedish-Egyptian Workshop in Sound and Vibration Research. Cairo – Alexandria.                                                              |

#### **Organized and lectured in the following short courses:**

| <b>Date</b>    | <b>Course Title</b>         | <b>Location</b>                                               |
|----------------|-----------------------------|---------------------------------------------------------------|
| 26 Aug 2018    | Acoustic Design of Mufflers | Inter-Noise 2018, Chicago, USA                                |
| 20-22 Aug 2018 | Acoustic Design of Mufflers | Naval Nuclear Laboratory - Bettis Laboratory, Pittsburgh, USA |
| 27 May 2018    | Acoustic Design of Mufflers | Euro-Noise 2018, Crete Greece                                 |

|                 |                                                                                      |                                                                               |
|-----------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 4-5 May 2017    | Acoustic Design of Mufflers                                                          | Università degli Studi di Brescia, Brescia, Italy                             |
| 8 Sep 2016      | Acoustic Design of Mufflers                                                          | ICA2016, Catholic University of Argentina, Buenos Aires, Argentina            |
| 12-13 May 2016  | Acoustic Design of Mufflers                                                          | The University of Kentucky, Lexington, KY, USA                                |
| 20-22 Oct 2015  | Acoustic Design of Mufflers                                                          | Vibratec, Lyon, France.                                                       |
| 13 Aug 2015     | Acoustic Design of Mufflers                                                          | Internoise 2015, San Francisco, CA, USA                                       |
| 26 Jun 2015     | Acoustic Design of Mufflers                                                          | SAE 2015 Noise and Vibration Conference and Exhibition, Grand Rapids, MI, USA |
| 2-4 Dec 2014    | Passive Noise Control                                                                | FlowAirS Initial Training Network workshop, funded by EU, Cairo, Egypt.       |
| 19-21 Nov 2014  | Acoustic Design of Mufflers                                                          | Great Lakes Sound & Vibration, USA.                                           |
| 18 Nov 2014     | Acoustic Design of Mufflers                                                          | Textron Systems, USA.                                                         |
| 11-12 Jul 2014  | Acoustic Design of Mufflers                                                          | ACE Alfaris FZC, Dubai, UAE.                                                  |
| 1-3 April 2014  | Acoustic Design of Mufflers                                                          | Vibratec, Lyon, France.                                                       |
| 15 Sep 2013     | Acoustic Design of Mufflers                                                          | Internoise 2013, Innsbruck, Austria                                           |
| 17-18 Sep 2012  | Acoustic Design of Mufflers                                                          | Shanghai, China                                                               |
| 19 Aug 2012     | Acoustic Design of Mufflers                                                          | Internoise 2012, New York, USA                                                |
| 13-14 May 2012  | Ray and Room Acoustics                                                               | ASU Sound & Vibration Lab., Cairo.                                            |
| 22-23 Apr 2012  | Human Factors issues in design and development of virtual environments for education | South Valley University, Aswan.                                               |
| 6-8 Feb 2012    | Digital Signal Processing, Rotating Machinery and Sound Quality                      | ASU Sound & Vibration Lab., Cairo.                                            |
| 1-2 Nov 2011    | Sound in pipes and ducts - analysis and design of low noise systems                  | Grand Rapids, MI, USA                                                         |
| 14-15 Sep 2011  | Acoustic Design of Mufflers                                                          | The Royal Institute of Technology, Stockholm.                                 |
| 16-17 Oct 2010  | Acoustic Design of Mufflers                                                          | SAE-Brazil, Florianopolis                                                     |
| 10-12 May 2010  | Acoustic and Vibration Measurements                                                  | ASU Sound & Vibration Lab., Cairo.                                            |
| 5-6 May 2010    | Modal Analysis                                                                       | ASU Sound & Vibration Lab., Cairo.                                            |
| 26-27 Oct 2009  | Vibration Isolation, Theory and Practice.                                            | ASU Sound & Vibration Lab., Cairo.                                            |
| 20-22 Oct 2009  | Acoustic Design of Mufflers                                                          | Abouelyazeed Mufflers Company, 6 <sup>th</sup> October City.                  |
| 18-19 Oct 2009  | Signal Analysis Techniques.                                                          | ASU Sound & Vibration Lab., Cairo.                                            |
| 10-13 Dec 2008  | Machine Noise Control and Acoustic Design of Muffler                                 | Indian Institute of Technology in New Delhi (IIT-Delhi), India                |
| 19, 20 Nov 2008 | Acoustic Design of Mufflers                                                          | The Royal Institute of Technology, Stockholm.                                 |
| 12, 13 Sep 2007 | Acoustic Design of Mufflers                                                          | ASU Sound & Vibration Lab., Cairo.                                            |
| 5-7 Sep 2007    | Machine Noise & Vibration Control                                                    | ASU Sound & Vibration Lab., Cairo.                                            |
| 19-21 Jun 2007  | Vibration Measurement                                                                | ASU Sound & Vibration Lab., Cairo.                                            |
| 12-14 Jun 2007  | Vibration Measurement                                                                | ASU Sound & Vibration Lab., Cairo.                                            |
| 30 May 2007     | Acoustics and Noise Control                                                          | Saudi Aramco, Dhahran, SA.                                                    |
| 26-27 May 2007  | Finite Element Modeling using COMSOL Multiphysics                                    | Saudi Aramco, Dhahran, SA.                                                    |
| 23-25 Dec 2006  | Machine Condition Monitoring                                                         | ASU Sound & Vibration Lab., Cairo.                                            |
| 7-9 Nov 2006    | Machine Condition Monitoring                                                         | ASU Sound & Vibration Lab., Cairo.                                            |

|                |                                                   |                                                                     |
|----------------|---------------------------------------------------|---------------------------------------------------------------------|
| 1-10 Sep 2006  | Introduction to MATLAB                            | ASU Sound & Vibration Lab., Cairo.                                  |
| 15-17 Jul 2006 | Finite Element Modeling using COMSOL Multiphysics | SABIC Research and Technology, Riyadh, SA.                          |
| 21-23 Mar 2006 | Insight into Engineering Noise Control            | ASU Sound & Vibration Lab., Cairo.                                  |
| 11-13 Mar 2006 | Introductory Course in Building Acoustics         | ASU Sound & Vibration Lab., Cairo.                                  |
| 6-8 Aug 2005   | Finite Element Modeling using COMSOL Multiphysics | King Abdulaziz City for Science and Technology (KACST), Riyadh, SA. |

**Guest Lecturer:**

| <b>Date</b>    | <b>Event</b>                                                                                                                                          | <b>Lecture Title</b>                                                                  |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 25 Jun 2015    | SAE 2015 Noise and Vibration Conference and Exhibition                                                                                                | Exhaust/Intake Silencer Design                                                        |
| 21-22 Dec 2014 | Joint Egyptian-Jordanian Workshop on Technical and Research Collaboration                                                                             | Dynamics of Wind Turbines                                                             |
| 25 Nov 2014    | National Tempus Information Day, Cairo, Egypt                                                                                                         | Tempus Success Story in Egypt: e-laboratories for Physics and Engineering Education   |
| 29 Jun 2014    | ASHRAE Technical Committee 2.6 Meeting: Sound & Vibration Control. 2014 ASHRAE Annual Conference, Seattle, USA                                        | Modeling of Acoustics in Duct Networks                                                |
| 23 Apr 2014    | The Interdisciplinary & Multidisciplinary Studies and the Needs of the Labor Market Conference, Ain Shams University, Cairo                           | Multidisciplinary efforts for the development of e-laboratories in education          |
| 19 May 2013    | Vibro-Acoustic Consortium (VAC) regular workshop, Grand Rapids, MI, USA.                                                                              | Modeling Sound in Ducts in High Frequency using Teo-Ports                             |
| 27 Apr 2013    | Egyptian Engineering Syndicate, Cairo, Egypt                                                                                                          | Environmental and Industrial Acoustics                                                |
| 13 Jan 2013    | National Tempus Information Day, Cairo, Egypt                                                                                                         | Tempus Success Story in Egypt: Innovative Education Solutions at Ain Shams University |
| 20 Sep 2012    | Automotive Testing Expo Shanghai 2012, China                                                                                                          | Recent Advances in Muffler Design                                                     |
| 23 May 2012    | The 2 <sup>nd</sup> Science and Technology Festival – NVH Technology Forum, Great Wall Motors, Baoding, China                                         | Recent Advances in Muffler Design                                                     |
| 3 Nov 2011     | Vibro-Acoustic Consortium (VAC) regular workshop, St. Charles, IL, USA                                                                                | Flow Generated Noise in Duct Systems and Mufflers                                     |
| 16 May 2011    | Vibro-Acoustic Consortium (VAC) regular workshop, Grand Rapids, MI, USA                                                                               | Muffler Optimization for a Truck Exhaust System                                       |
| 4 Nov 2010     | Vibro-Acoustic Consortium (VAC) regular workshop, St. Charles, IL, USA                                                                                | Measurement of Diesel Particulate Filter Transmission Loss with Flow                  |
| 18 Jan 2010    | National Tempus Information Day, Cairo, Egypt                                                                                                         | Tempus success story in Egypt: Sound and Vibration Education at Ain hams University   |
| 21-27 Mar 2009 | Guest Researcher for one week, Mechanical Engineering Dept., Kuwait University, Kuwait                                                                | Finite Element Modeling using COMSOL Multiphysics                                     |
| 22 Jan 2009    | National Tempus Information Day, Stockholm, Sweden.                                                                                                   | Swedish Egyptian Co-operation in Sound and Vibration.                                 |
| 22-23 Dec 2008 | Expert in a Tempus Project on New Curriculum in CAD/CAE/CAM and Computer Modeling at Tashkent Automotive Road Institute (TARI), Tashkent, Uzbekistan. | Design of Engineering Labs for Sound and Vibration Education                          |
| 5 Nov 2008     | Vibro-Acoustic Consortium (VAC) regular workshop, Indianapolis, IN, USA                                                                               | A Test Rig for Measuring Muffler Performance with Flow                                |

|             |                                                                                                                                                   |                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 14 Jul 2008 | Environmental Impact Assessment in Egypt, National Research Center, Cairo, Egypt.                                                                 | Noise Impact Studies in Egypt, Examples.                                      |
| 31 Aug 2007 | Workshop on Noise Policies in Developing Countries, Istanbul, during Internoise 2007                                                              | Noise Policies in Egypt                                                       |
| 26 May 2007 | Vibration Institute, Saudi Arabia Local Chapter Meeting, Dhahran, Saudi Arabia                                                                    | A proactive approach to functional performance engineering                    |
| 10 May 2007 | National Instruments Academic Day, Beirut.                                                                                                        | Use of LABVIEW in teaching sound and vibration courses                        |
| 2 Nov 2006  | Tempus Contact Seminar Egypt-Sweden. Organized by the National Tempus Office in Egypt and the International Program Office in Sweden, Cairo.      | Swedish-Egyptian Cooperation in Sound and Vibration                           |
| 19 Apr 2006 | Computer Based Measurement and Automation for Industrial Applications. Organized by Akhbar Elyoum Academy and National Instruments Arabia, Cairo. | Computer-Based Measurements of Sound and Vibration for Education and Research |
| 2006 - 2007 | Postgraduate course on Special Topics in Aircraft Structures: Passive damping. Cairo University, Aerospace Department.                            | Passive Acoustic Damping Inside Ducts                                         |

### **Supervised Theses**

#### **Ph.D.**

| <b>Year</b> | <b>University</b>                  | <b>Name</b>      | <b>Title</b>                                                                |
|-------------|------------------------------------|------------------|-----------------------------------------------------------------------------|
| --          | Royal Institute of Technology, SWE | Mina Wagih       | Acoustic Design of Heating, Ventilation and Air Conditioning (HVAC) Systems |
| 2008        | Cairo University                   | Walid El-Sallamy | Active Noise Control in Flow Ducts                                          |
| 2016        | Royal Institute of Technology, SWE | Maaz Farooqui    | Innovative techniques for sound reduction inside ducts.                     |

#### **Licenciate**

| <b>Year</b> | <b>University</b>                  | <b>Name</b>    | <b>Title</b>                                                                      |
|-------------|------------------------------------|----------------|-----------------------------------------------------------------------------------|
| 2012        | Royal Institute of Technology, SWE | Sara Elsaadany | Investigation and Optimization of the acoustic performance of the Exhaust Systems |

#### **M.Sc.**

| <b>Year</b> | <b>University</b> | <b>Name</b>         | <b>Title</b>                                                                               |
|-------------|-------------------|---------------------|--------------------------------------------------------------------------------------------|
| --          | Ain Shams Univ.   | Mohamed Talaat Harb | 1D Modeling of duct systems using artificial intelligence                                  |
| --          | Ain Shams Univ.   | Ali Zein            | Web-Based controlled machines.                                                             |
| --          | Ain Shams Univ.   | Mohamed Gaber       |                                                                                            |
| --          | Ain Shams Univ.   | Walid Hesham        |                                                                                            |
| 2017        | Cairo University  | Ahmed AboSrea       | Muffler Design Optimization for Cost Reduction                                             |
| 2016        | Ain Shams Univ.   | Ahmed Hisham        | Testing of segmented wind turbine blade.                                                   |
| 2015        | Ain Shams Univ.   | Eman Zidan          | Noise Impact Assessment of Wind Turbines                                                   |
| 2014        | Ain Shams Univ.   | Weam Elsahar        | 1D Modeling of Heat Transfer in duct networks using two-ports                              |
| 2014        | Ain Shams Univ.   | Ahmed Okasha        | Analysis of pressure pulsations in pipeline networks to prevent vibration induced failures |
| 2014        | Ain Shams Univ.   | Mina Wagih          | Modeling of Duct Acoustics in the High Frequency Range Using Power Method                  |
| 2009        | Ain Shams Univ.   | Sara Elsaadany      | On the Simulation of Sound Propagation Inside Ducts                                        |
| 2009        | Ain Shams Univ.   | Moustafa Mahmoud    | Acoustic Source Localization using Microphone Arrays                                       |

#### **B.Sc.**

| <b>Year</b> | <b>University</b> | <b>Number of Students</b> | <b>Title</b>                                                                        |
|-------------|-------------------|---------------------------|-------------------------------------------------------------------------------------|
| 2012        | Ain Shams Univ.   | 5                         | Web-based controlled machines                                                       |
| 2012        | Ain Shams Univ.   | 8                         | Data Acquisition and analysis of pressure variations in Oil & Gas pipeline networks |
| 2011        | Ain Shams Univ.   | 5                         | Development of a Flight Simulator in Virtual Reality                                |
| 2011        | Ain Shams Univ.   | 3                         | Wind Turbine Control Schemes aiming at providing                                    |

|      |                 |    |                                                                                                |
|------|-----------------|----|------------------------------------------------------------------------------------------------|
| 2011 | Ain Shams Univ. | 7  | reliable and stable generated power<br>Design and Development of an Omni-directional Treadmill |
| 2011 | Ain Shams Univ. | 4  | Development of Student Experiments in Virtual Reality                                          |
| 2010 | Ain Shams Univ. | 4  | Design and Development of an Active Vehicle Suspension System                                  |
| 2010 | Ain Shams Univ. | 5  | Modeling Of Public Transport Vehicle Using Virtual Reality                                     |
| 2010 | Ain Shams Univ. | 5  | Modeling of Robotic Cells in Virtual Reality                                                   |
| 2009 | Ain Shams Univ. | 5  | Modeling Vehicle Dynamics in Virtual Reality                                                   |
| 2009 | Ain Shams Univ. | 5  | Using Virtual Reality in the Design of Centrifugal Pumps                                       |
| 2009 | Ain Shams Univ. | 4  | Modeling and Simulation of Sound Propagation in Virtual Reality                                |
| 2009 | Ain Shams Univ. | 2  | Drawing Cairo City Noise Map                                                                   |
| 2008 | Ain Shams Univ. | 12 | Balancing Machine                                                                              |
| 2008 | Ain Shams Univ. | 5  | Environmental Noise Control                                                                    |
| 2008 | Ain Shams Univ. | 4  | Modeling of Perforates Inside Mufflers for Acoustic Attenuation                                |
| 2008 | Ain Shams Univ. | 3  | Finite Element Modeling of Non-Conventional Transporters                                       |

#### **Training Experience and Attended Courses**

| <b>Year – Period</b> | <b>Institution</b>                                       | <b>Brief description</b>                                                                                                                                                                                                                                                    |
|----------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2015 – 2 days        | Ain Shams University                                     | Strategic Planning                                                                                                                                                                                                                                                          |
| 2015 – 2 days        | Ain Shams University                                     | Ethics of Profession                                                                                                                                                                                                                                                        |
| 2015 – 2 days        | Ain Shams University                                     | Communication Skills in different Education Patterns                                                                                                                                                                                                                        |
| 2010 – 3 days        | Ain Shams University                                     | Organization of Scientific Conferences                                                                                                                                                                                                                                      |
| 2009 – 3 days        | Ain Shams University                                     | Ethics of Scientific Research                                                                                                                                                                                                                                               |
| 2009 – 3 days        | Ain Shams University                                     | Management of Research Team                                                                                                                                                                                                                                                 |
| 2007 – 3 days        | Ain Shams University                                     | The Credit Hour System                                                                                                                                                                                                                                                      |
| 2006 – 3 days        | Ain Shams University                                     | Publishing Research Articles in International Journals                                                                                                                                                                                                                      |
| 2006 – 2 days        | Ain Shams University                                     | Effective Management of Meetings                                                                                                                                                                                                                                            |
| 2005 – 3 days        | The Institute of Sound and Vibration Research (ISVR)     | Advanced Noise Control Course                                                                                                                                                                                                                                               |
| 2005 – 3 days        | The Institute of Sound and Vibration Research (ISVR)     | Vibration Isolation Course                                                                                                                                                                                                                                                  |
| 2003 – 3 days        | Stanford University, CA, USA.<br>Held at KTH, Stockholm. | I-RITE (Integrating Research Into the Teaching Environment) program. How to communicate research to non-experts.<br><br>( <a href="http://www.stanford.edu/group/i-rite/statements/2003/elnady.html">http://www.stanford.edu/group/i-rite/statements/2003/elnady.html</a> ) |
| 2003 – 2 days        | COMSOL, Sweden.                                          | A course on FEMLAB, Introduction and advanced Modeling.                                                                                                                                                                                                                     |
| 2001 – 5 days        | Technical University in Eindhoven, Netherlands.          | A course on Aeroacoustic Theories and Modeling.                                                                                                                                                                                                                             |
| 1997 – 5 days        | Vibration Institute USA (Cairo).                         | A course in Modal Testing for Vibration Analysis                                                                                                                                                                                                                            |
| 1996 – 2.5 mon       | Procter & Gamble - Egypt.                                | Developing software to increase Capacity Utilization of Syndets production line. Developing Process Training on Syndets production.                                                                                                                                         |

#### **Non-Academic Activities**

| <b>Field</b> | <b>Activities</b>                                                                                                                                                                                                      |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sports       | <ul style="list-style-type: none"> <li>• Judo, Football, Swimming, Tennis, Horse-Riding and Innebandy.</li> <li>• Champion of Egypt in Judo (1992, 1996). Member of the Egyptian National Team (1992-1997).</li> </ul> |



- Carrier of Black Belt in Judo (2<sup>nd</sup> Dan).
  - Swedish Elit license in Judo refereeing.
  - Building and Flying Remote-Controlled Model Aircrafts.
- Youth Conferences
- Attending an Environmental Youth Conference in Greece organized by the European Union representing Egypt (1997).
  - Participating in the 3rd Egyptian International Model European Union (EIMEU'98) as the Delegate of Spain, Euro-Mediterranean dialogue; organized by CDAEEY (The Cooperation and Development Association for Egyptian and European Youth) (1998).
  - Participating in the Outreach Program – Training course on the tools of environmental education, organized by CDAEEY (1999).
- University
- Member of Student's Union (1993 – 1997).
  - President of Sports Committee in the Students' Union (1997).
  - Editor of the Mechanical Department Newsletter, printed monthly (1998 – 2000).
  - Organizer of Athletic Games between students and lecturers (1999 – 2000).

**Prof Dr Mohamed Hazem Abdellatif**  
**Professor of Materials and Manufacturing Engineering**  
**Design & Production Engineering Dept**  
**Faculty of Engineering, Ain Shams University**  
**Cairo 11517, EGYPT**  
**Mobile+ 00202-01223189457,**  
**Telefax +00202- 26850617,**  
**Home Tel. 00202-37480702**  
**E-mail: [latif\\_drhazem@yahoo.com](mailto:latif_drhazem@yahoo.com)**  
**[mhalatif46@hotmail.com](mailto:mhalatif46@hotmail.com)**  
**[Mohamed\\_abdellatif@eng.asu.edu.eg](mailto:Mohamed_abdellatif@eng.asu.edu.eg)**

#### **DATE & PLACE OF BIRTH**

- **May 2 , 1946 – Cairo , EGYPT**

#### **FAMILY STATUS**

- **Married , Daughter and Son**

#### **EDUCATION**

- **PhD Mechanical Engineering Ain Shams Univ. 1974**
- **MSc Mechanical Engineering Ain Shams Univ. 1970**
- **BSc Mechanical Engineering Ain Shams Univ. 1967**

#### **POSITIONS**

- **President of Latif Engineering Consulting Office ( LECO ) responsible for Planning , Studying, Evaluating and Supervising Industrial Projects in Egypt and Some Arab Countries.**
- **Professor of Production Engineering & Member of the Permanent Committee of Professors responsible for Promotion of University Professors in Egypt.**
- **Former Chairman of the Design & Production Engineering Department and Former member of the Faculty of Engineering Council.**
- **Coordinator of the External Relations of Ain Shams University and Member of the Cultural Relations Committee of the Faculty of Engineering .**

- **Former Member of the Education affairs and students Committee, the Postgraduate Studies Committee and the Permanent Committee of Associate Professors.**
- **Coordinator of the Agreements of Cooperation with the Chinese Beihang Univ. The American Drexel Univ., The Greek Technical Education Institute of Ionian Islands and the Imperial College, London.**
- **Representative of Ain Shams Univ. with the Industrial Modernization Center and the Society of Investors of 6 October.**
- **President of the Egyptian Society for Engineering Innovations.**
- **Member of Ain Shams Strategic Planning Committee responsible for Planing Scientific Research Strategy for Ain Shams University for the Year 2007 – 2012.**
- **Coordinator of Ain Shams Univ. International Relations Comm.**
- **Director of the Projects Management Unit of Ain Shams University.**
- **Technical Consultant Registered at the General Syndicate of Engineers no.242.**
- **Strategic Planner for the Industrial Development in Egypt up to year 2050.**
- **Member of the Impact Assessment Committee of Ain Shams University**
- **Member of the Editorial Committee of the International Electronic Journal of the Greek Technical Education Institute of Ionian Islands .**
- **Focal Point for the European Community at Ain Shams University .**

## **AWARDS**

- **Man of the Year 1998 by the American Autobiographical Society due to Outstanding Research Capabilities.**
- **The Egyptian Encyclopedia for Outstanding Scientific Personalities.**
- **Fellowship at the Mass. Inst. of Tech. (MIT), USA, 1975.**
- **Fellowship at Drexel University, USA, 1977.**
- **DAAD Award 1982.**
- **DAAD Award 1994 at TU Berlin, Germany.**
- **ERASMUS MUNDUS/Element Project award, June 2013**

## **Memberships**

- **Fellow of the Egyptian Society of Mechanical Engineers.**
- **Member of the General Syndicate of Engineers.**

- **Member of the Gezira Sporting Club.**
- **Member of the Egyptian Automobile Club.**
- **Member of the Board of Directors of Elektessadia Co.**
- **Member of the Sports Committee at the Gezira Club.**
- **Member of the Board of Directors of Sharkiah National Company for Food Security.**
- **Member of the Board of Directors TAE KWON DO Cairo District – TAE KWON DO Federation.**
- **Member of the Board of Directors of the Materials Engineering Unit at Ain Shams University.**
- **Member of the Board of Directors of Mansoura Poultry Company**
- **Member of the Council of Research Ethics, The Egyptian Academy of Science and Technology**

## **Appointments**

- **10/1985-present-Professor-Ain Shams University.**
- **8/2004-7/2006-Chairman of Design & Prod. Eng. Dept.**
- **4/2002-7/2004-Director of Materials Engineering Unit.**
- **4/1980-10/1985-Associate Professor-Ain Shams Univ.**
- **9/1976-4/1978-Postdoctoral Fellow at Drexel Univ.,USA.**
- **12/1975-9/1976-Postdoctoral Fellow at MIT, CAM.,USA**
- **4/1974-12/1975-Assistant Professor-Ain Shams Univ.**
- **4/1970-4/1974-Assistant Lecturer-Ain Shams Univ.**
- **10/1967-4/1970-Demonstrator-Ain Shams Univ.**

## **MAIN RESEARCH OR TECHNOLOGY TOPICS**

**Nanomaterials – Metal Matrix Composites - Polymeric Composites with Natural Fibers – Composite Laminates – Sandwich Materials - Production Technology – Projects Management - Solar Energy – Manufacturing Engineering – Technology Transfer – Industrial Development**

## **INTERNATIONAL ACTIVITIES**

- **Coordinator of Agreements between Ain Shams University and American, European and Asian Universities.**
- **Organizing and Participating in International Conferences in USA, Canada, Australia, Finland, Greece, Lebanon and Egypt.**
- **President of 7<sup>th</sup> International Conference PEDD7, Ain Shams University, Cairo, Egypt, 2006.**
- **Collaborating in Joint Research Supervision and Research Projects with Drexel University ( USA ), Case Western Reserve University ( USA ), Technical University of Berlin ( Germany ) and University of Clausthal ( Germany ).**
- **Conducting Research Work and Visiting MIT ( USA ), Beihang ( China ) & Monash Univ ( Australia ), McGill and Concordia Univ ( Canada ) and Technical Education Institute of Ionian Islands ( Greece ) .**
- **Coordinator of Projects Funded by the European Union, especially Erasmus Mundus, FFEEBB2, Element, Welcome, EU-Metalic I & II Projects**

## **RECENT RELEVANT PUBLICATIONS**

1. **N. Ramadan, I. Taha, R. Hammouda and M.H. abdellatif , “ Characterization of Hybrid Sic – Jute Epoxy Composite produced by VARI Technique “ under publication**
2. **N. Ramadan, I. Taha, R. Hammouda and M.H. abdellatif, " Alkali treatment of jute fabric for Vacuum Assisted Resin Infusion," Proceedings of second international conference for industry academia collaboration, Cairo-Egypt, 8th April-2015**
3. **Ayman El – Wahab, Adel El – Shabasy and M.H.Abdellatif, " Effect of Chemical Treatment for Natural Fibres on the Mechanical Properties of Polypropylene Composites ", 1<sup>st</sup> International Conference on Natural Fibres, Guimares, Portugal, June 2013.**
4. **R.B.EL-Gamsy, Hala A. Hassan and M.H.Abdellatif, " Mechanical Behavior of LDPE Composite reinforced with Natural Fibres ", 1<sup>st</sup> International Conference on Natural Fibres, Guimares, Portugal, June 2013.**
5. **Ayman A. Abdelwahab, Adel B. El – Shabasy and M.H.Abdellatif, " Failure Modes of Sugar – Cane Bagasse Fibres – Polypropylene Composites with two**

**Parallel Pin Loaded Holes " , Journal of Al Azhar University, Engineering Sector ( JAUES ), vol.7, No.25, October 2012, 1825 – 1833.**

- 6. R.B.EL-Gamsy, Hala A. Hassan and M.H.Abdellatif , " Influence of Fibre and Matrix on the Mechanical Properties of Natural Composite Materials ", Journal of Al Azhar University, Engineering Sector ( JAUES ), Vol.7, No.25,October 2012, 1775-1788.**
- 7. M.S.E.Tohamy,M.H.Abdellatif and N.A.E.Azab, Deformation and Failure of 3-D Braided Composites, Proc. of 7<sup>th</sup> International Conference of Production Engineering and Design for Development, PEDD7, Ain Shams Univ., Cairo,Egypt (2006).**
- 8. M.H.Abdellatif,H.Palkowski and R.El Gamsy ,Behaviors of sandwich Materials, Proc. of PEDD7,Ain Shams Univ., Cairo, Egypt (2006).**
- 9. I.Taha,M.H.Abdellatif and P.Dietz, Infiltration and Coating of Rapid Prototyping parts, Advanced Engineering Materials 7,No.1-2,91(2005).**
- 10. E.A. Youssef, M.H. Abdellatif and M . Al- Nomrossy, Mathematical Model for Intraply Hybrid Composites Characterization, 8<sup>th</sup> Conference on Theoretical and Applied Mechanics,ASRT,Cairo,April5-7( 2005).**
- 11. H.A. Hassan, J. J. Lewandowski and M.H. Abdellatif, Fatigue Crack Propagation of Al6090/SiCp-Al6013 Laminated Metal Composites, Metallurgical and Materials Transactions A, Vol.35A, 45-52 (2004).**
- 12. HALA A.HASSAN, J.J.LEWANDOWSKI, and M.H. ABD EL-LATIF, Effects of Lamination and Changes in Layer Thickness on Fatigue – Crack Propagation of Lightweight Laminated Metal Composites, Metallurgical and Materials Transactions A,Vol.35A,45-52, January ( 2004 ).**
- 13. H.A. HASSAN, J.J. LEWANDOWSKI and M.H. ABD EL- LATIF, Effect of Changes in Temperature on Fatigue Crack Growth of Adhesively Bonded Al 2080 / Sic / 20p – 2080 Al Laminated Composites, Journal of Materials of Materials Science, Vol. 39, 3063-3067, ( 2004 ).**

# **CURRICULUM VITAE**

*Professor*

**Hesham Aly Abdelhamed Sonbol**

Design and Production Engineering Department  
Faculty of Engineering  
Ain Shams University  
2019

# CURRICULUM VITAE

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**Name** : Hesham Aly Abdelhamed Sonbol

## **Personal Data**

**Date of Birth** : November, 23, 1956.  
**Marital Status** : Married and has two children.  
**Nationality** : Egyptian  
**Home Address** : 6 Mohamed Metwaly Elsharawy, 10<sup>Th</sup> Region, Nasr City, Cairo, Egypt.  
**Languages** : Arabic, English (read and speak).  
**Telephone** : [02-24723242] – Cairo., 01001494125 (mobile)  
**E-mail** : hesham\_senbel@eng.asu.edu.eg  
**Fax.** : 02-26822576  
**Major specialization:** Design and Production Engineering.  
**Minor Specialization:** Engineering Drawing, Theory of Machine, Machine Design, Stress Analysis.

**Present Job:** Professor of Design and Production Engineering, Design and Production Engineering Department, Faculty of Engineering, Ain Shams University, Cairo, Egypt.

**Work Address:** Design and Production Engineering Department, Faculty of Engineering, Ain Shams University, Abbasia, Cairo, Egypt.

**Work Tel.** : 26826636 - 26826637 ext. 2726

**Fax.** : (202) 26850617

## **Education**

- 1- **Degree** : B.Sc. in Mechanical Engineering.  
**Institution** : Faculty of Engineering - Ain Sham University.  
**Specialization** : Design and Production Engineering.  
**General Grade** : Distinction with Honour Degree. Ranked "First" in class of 82 candidates.  
**Date** : October, 1974 to June, 1979.
- 2- **Degree** : M.Sc. in Mechanical Engineering.  
**Institution** : Faculty of Engineering - Ain Sham University.  
**Specialization** : Prod. Eng. "Electrochemical Broaching."  
**Date** : December, 1980 to February, 1984.
- 3- **Degree** : Ph.D. in Mechanical Engineering.  
**Institution** : Faculty of Engineering - Ain Sham University.  
**Specialization** : Prod. Eng. "Three Dimensional Electrochemical Machining"  
**Date** : June, 1985 to February, 1991.
- 4- **Degree** : Associate professor in Mechanical Engineering.  
**Specialization** : Design and Production Engineering  
**Date** : February , 2001
- 5- **Degree** : Professor in Mechanical Engineering.  
**Specialization** : Design and Production Engineering  
**Date** : May , 2006



## **1- Academic experience:**

**Teaching the following:**

### **1-1 Ain Shams University, Faculty of Engineering, Design and Prod. Eng. Department.**

- 1- Engineering Drawing and Computer Graphic
- 2- Mechanical Assembly Drawing and Electrical Drawing
- 4- Machine Design and Stress Analysis.
- 5- Theory of Machines.
- 6- Production Engineering.
- 7- Machine Tool Design
- 8- Non-Conventional Machining
- 9- B.Sc. Project.

### **1-2 British University-(BUE)**

- 1- Machine Design
- 2- Theory of Machine

### **1-3 Military High Collage**

- 1- Engineering Drawing and Computer Graphic
- 2- Mechanical Assembly Drawing
- 3- Machine Design

### **1-4 High Institute Technology (10 of ramadan)**

- 1- Engineering Drawing Machine Design
- 2- Mechanical Assembly Drawing
- 3- Stress Analysis and Machine Design

### **1-5 Obour High Institute for Engineering and Technology**

- 1- Engineering Drawing and Machine Design
- 2- Mechanical Assembly Drawing
- 3- Mechanical Engineering

### **1-6 AKhbar El-Yom Academy**

- 1- Engineering Drawing
- 2- Stress Analysis and Mechanical Engineering

### **1-7 MSA University**

- 1- Engineering Drawing and Machine Design.
- 2- Production Engineering

### **1-8 MIU University**

- 1- Engineering Drawing

### **1-9 FUC University**

- 1- Engineering Drawing & Mechanical Drawing
- 2- Theory of Machine and Machine Design.

### **1-10 Workers University**

- 1- Engineering Drawing & Machine Design

### **1-11 French university**

- 1-Theory of Structure
- 2- Stress Analysis
- 3- Machine Design

## 2- Level of computer command:

Excellent for: Computer graphic (AutoCade- FlixCade), Microsoft office (Word-Excel- Power point,...), Using inter net

## 3- Presentations

Presented my published papers at the all-local conferences and the international conferences (*The 33 MATADOR Conference, Manchester, UK, 2000 -- 2<sup>nd</sup> CIRP International Seminar on Intelligent Computation in Manufacturing Engineering, ICME 2000, Capri, Italy -- 13<sup>th</sup> International Symposium for Electromachining ISEM XIII, Spain, 2001*).

## 4- University activities

Assisted in organizing the International Conferences for Ain Shams University, Faculty of Engineering, Design and Production Engineering Department, PEDD conferences, 2010, 2006, 2002, 1997, 1993, 1990, 1987, 1984.

## 5- Publications

### • Books:

- 1- Principals of Machine Design
- 2- Theory of Structures and Stress Analysis " Solved Examples & useful Data " Part I
- 3- Theory of Structures and Stress Analysis " Solved Examples & useful Data " Part II
- 4- Engineering Drawing, (Ain Shams University)
- 5- Mechanical and Electrical Drawing, (Ain Shams University)
- 6- Principals of Assembly Drawing, (Ain Shams University)
- 7- Computer Graphics (Ain Shams University)
- 8- Engineering Drawing, (Obour High Institute for Engineering and Technology)
- 9- Graphics I, Graphics II (MSA University)

10- الرسم الهندسى - الجامعة العمالية

11- الرسم الهندسى - الكلية التكنولوجية بالصحافة و المطرية

12- الرسم الهندسى والصناعى ( الصف الثانى ) بالمدارس الثانوية الفنية الصناعية للمعدات الثقيلة

13- مبادئ الرسم الفنى لطلبة المدارس الفنية الصناعية المتقدمة نظام الخمس سنوات

14- الرسم الفنى للصف الثانى لطلبة المدارس الفنية الصناعية المتقدمة نظام الخمس سنوات

للتخصصات الميكانيكية - تبريد وتكييف الهواء - المركبات (2008).

15- الرسم الفنى للصف الأول لطلبة المدارس الثانوية الفنية للتعليم والتدريب المزدوج (مبارك / كول)

16- الرسم الفنى للصف الثالث للمدارس الفنية الصناعية المتقدمة نظام الخمس سنوات للتخصصات الميكانيكية

17- الرسم الفنى للصف الثانى لطلبة المدارس الثانوية الفنية للتعليم والتدريب المزدوج (مبارك / كول)

18- الرسم الفنى للصف الثالث لطلبة المدارس الثانوية الفنية للتعليم والتدريب المزدوج (مبارك / كول)

• ***Lecture notes:***

- 1- Theory of Machines.
- 2- Machine Design
- 3- Stress Analysis
- 4- Mechanical Engineering

• ***Papers:***

- 1- "Utilization of Palm Wood Rib as a New Type of Wood", Technical Report, Cairo, Egypt, 1992.
- 2- "Electrochemical Broaching and Stationary Cutting - A Comparative Study", 3rd MDP Conference, pp.477-483, Cairo, Egypt, 1985.
- 3- "Effect of Variable Feed Rate on Electrochemical Shaping", 6th AMME conference, pp.443- 452, Cairo, Egypt, 1994.
- 4- " Flexible Feed Control system for Producing Predefined Shapes by Electrochemical Machining", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 30, pp 235-246, 1995.
- 5- "On The Machinability Criteria of Stainless Steel", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 31, pp 305-315, 1996.
- 6- "Measurement of Residual Stress in Autofrettaged Thick-Walled Tubes Using Electrochemical Boring Technique", 7<sup>th</sup> AMME conference, Cairo, Egypt, pp 145-155, May, 1996.
- 7- "Electrochemical Machining Performance Using Super Conductive Electrolytes", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 32, pp 591-601, 1997- Also- 5<sup>th</sup> International Conference on Production Engineering and Design for Development PEDD5 , Cairo, Egypt, pp 113-122, 1998.
- 8- "Electrochemical Machining by Using a Compound Tool ", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 34, 1999.
- 9- "Factor Affecting Electrochemical Honing", The 33 MATADOR Conference, Manchester, UK, 2000.
- 10- "Experimental and computational Analyses of Ultrasonic Cutting of Frozen Foods", 2<sup>nd</sup> CIRP International Seminar on Intelligent Computation in Manufacturing Engineering, ICME 2000, Capri, Italy.
- 11- "Optimization of Electrochemical Grinding Process for titanium Alloys", 16<sup>th</sup> International Conference- CAPE 2000, Edinburgh, UK, 2000.
- 12- "Wheel Dressing and discharge effects in electrochemical grinding (ECG) of Titanium Alloy", 13<sup>th</sup> International Symposium for Electromachining ISEM XIII, Spain, 2001.
- 13- "Water-Jet Cutting of Meat Products" ", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 37, 2002.
- 14- "Effect of Electrochemical Machining Parameters on Wear Resistance and Friction Coefficient of Machined Steel Surface", 3<sup>rd</sup> Assiut University International Conference on Mechanical Engineering Advanced Technology for Industrial Production, 2002.
- 15- "Characteristics of Waterjet Cutting for The Offshore Industry", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 39, 2005.
- 16- "Towards Higher Productivity and Accuracy for ECM Hybridized with Laser Beam Machining", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 39, 2005.
- 17- "Experimental Investigation on Cutting Egyptian Marble Using Hacksawing and Abrasive Water-jet Techniques", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 39, 2005.

- 18- "Process Analysis and Dynamic Modeling of Electrochemical Inter-electrode Gap Using a Simple Wire Tool-cathode", Scientific Bulletin, Faculty of Engineering, Ain Shams University, Cairo, Egypt, 40, 2005.
- 19- "Mechanism of Metal Removal Rate in Electrochemical Grinding Process: a Theoretical Model and Experimental Verification", Ain Shams University –Faculty of Engineering, Scientific Bulletin, vol.40 - No.4, December 31, 2005.
- 20- "Improvement of Electrochemical Machining Accuracy by Using Electrochemical Lapping Technique", 7<sup>th</sup> International Conference on Production Engineering and Design for Development, (7-9)-2-2006.
- 21- "Electrochemical Machining by Using a Compound Tool", 8<sup>th</sup> International Conference on Production Engineering and Design for Development, (34-40)-2-2010..
- 22- "Improvement of Electrochemical Machining Accuracy by Using Electrochemical boring Technique", 8<sup>th</sup> International Conference on Production Engineering and Design for Development, (9-10)-3-2010.
- 23- "Effects of wire-EDM variables on surface roughness, micro hardness, kerf thickness and rate of metal removal", El-Azhar University –Faculty of Engineering, Scientific Bulletin, vol.30 - No.4, December 2011.
- 24- "Prediction of Electrochemical Machining Process Parameters Using Artificial Neural Networks", International Journal on Computer Science and Engineering (IJCSE), (125-132), Vol. 4 No. 01 January 2012.
- 25- "An experimental investigation into the effect of CNC-EDM wire cutting parameters for cross-feed turning process", 16<sup>th</sup> International Conference on Applied Mechanics and Mechanical Engineering (AMME-16), Cairo, Egypt, May 2014.
- 26- "Experimental investigation on the performance of vacuum re-infused composites", El-Azhar University –Faculty of Engineering, Scientific Bulletin, vol.32 - No.6, December 2015.
- 27- "Automated inspection of assembly parts using machine vision", 16th International Conference on Aerospace Sciences & Aviation Technology, ASAT-16 – May, 2015.
- 28- "Vision-Based inspection system for detection and classification of metal parts defects", 1<sup>st</sup> International Conference on Material science and Engineering (ICMSE), February, 2016.
- 29- "Automated inspection of surface defects using machine vision", 17th International Conference on Applied Mechanics and Mechanical Engineering. AMME - April, 2016.
- 30- "Tribological effect of reinforced polymer gears with different carbon Nanotubes content", Engineering Research Journal, Faculty of Engineering, Shoubra, 2017
- 31- "An Investigation into the Effect of Co2 Laser Cutting Variables on Cutting Edge Quality of Stainless Steel 316 Sheets", 18th International Conference on applied mechanics & mechanical engineering, april 3-5, 2018,
- 32- "Modelling of Co2 Laser Cutting Parameters for Stainless Steel 316 Using Artificial Neural Network Technique".18th International Conference on applied mechanics & mechanical engineering, april 3-5, 2018,
- 33- "Prediction of abrasive water jet cutting parameters using artificial neural network", 18th International Conference on applied mechanics & mechanical engineering, april 3-5, 2018.

- 34- "Evaluation of abrasive water jet machining process parameters on cutting high strength hard material (Armox), 18th International Conference on applied mechanics & mechanical engineering, april 3-5, 2018.

## ***6- Contributions to Research and Development***

- 1- B.Sc. Project, 1996, "Design of a Variable Speed Drive."
- 2- B.Sc. Project, 1997, "Pneumatic Press Drive."
- 3- B.Sc. Project, 1998, "Electrochemical Fine Hole Drilling."
- 4- B.Sc. Project, 1998, "Stationary Cutting Electrochemical Machining."
- 5- B.Sc. Project, 1999, "Design of a Mobile Electrochemical Machining Unit."
- 6- B.Sc. Project, 2000, "Design of Wood Working Machine Useful to Utilize Palm Wood Ribs as a New Type of Wood."
- 7- B.Sc. Project, 2001, "Design of a Computerized Electrochemical Machining Cell."
- 8- Main Factors Affecting the Performance of Magneto-Rheological Clutches
- 9- M.Sc. Thesis, 2002, "Effect of Some Electrochemical Parameters on Shaping."
- 10- M.Sc. Thesis, 2003, "Electrochemical Sinking with a Multi-Tool Head"
- 11- M.Sc. Thesis, 2003, "Progressive Shape Formations for Internal Grooves during Stationary Electrochemical Machining"
- 12- Ph.D. Thesis, 2004, "Electrochemical Honing"
- 13- M.Sc. Thesis, 2005, Electrochemical Machining for Scraper Shapes
- 14- M.Sc. Thesis, 2008, Cylindrical EDM Wire Cut and Factors Affecting Surface Roughness
- 15- M.Sc. Thesis, 2008, Electrochemical Machining Using Intelligent Techniques
- 16- M.Sc. Thesis, 2011, Solar Water Design for Six Sigma
- 17- Ph.D. Thesis, 2018, Design for Non-Destructive Self-Disassembly
- 18- Ph.D. Thesis, 2018, Optimization of CO<sub>2</sub> Laser Cutting for Advanced Material
- 19- Ph.D. Thesis, 2018, Optimization of Abrasive Water Jet Cutting for Advanced Materials

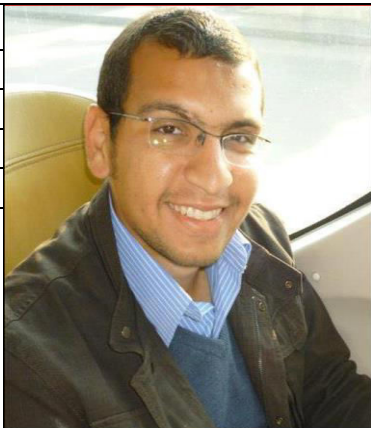
## **7- Private Work**

- 1- Consultant for the transportation ministry [Technical office of the minister]
- 2- Consultant of some industrial factories:
  - a. Qualival Company for metal working and ball valves
  - b. TTC Company for Water Desalination
  - c. Egyptian Engineer Company for Plastic Industry
- 3- Design of special purpose machine tool
  - Liquid filling machine for Koka-Kola international Company
  - Cutting machine for Palm Wood Ribs
  - Steel Structure for testing high pressure valves
  - High capacity gear box
- 4- Development of some industrial machines
  - High pressure ball valves especially for gas and petrol industry
- 5- Member of Engineering Consultancy Center (Ain Shams University-Faculty of Eng.)
- 6- Member of The Society of Mechanical Engineers

7- Consultant of Ministry of transportation.

8- Lecturer for some Training Courses especially for Engineering Drawings, failure analysis and machine design for example:

- 1- Machine Design
- 2- Advanced Machine Design
- 3- Failure Analysis for Machine Parts      تحليل الإختيارات لأجزاء الماكينات
- 4- Rolling Bearings (selection, mounting and dismounting)
- 5- التزييت والتشحيم
- 6- قراءة الرسومات الهندسية للمعدات الميكانيكية
- 7- زيادة المهارات الفنية للرسامين الميكانيكيين
- 8- برنامج الرسم بإستخدام الحاسب (أوتوكاد)
- 9- تصميم المعدات الميكانيكية وأسلوب الهندسة العكسية
- 10- برامج أعمال الصاج (تقاطع وإفراد الأسطح)
- 11- الهندسة العكسية وتطبيقاتها الصناعية

|                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Dr. Amr Ahmed Sayed Shaaban</b>                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                  |  |
|                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Birth date &amp; place:</b> Aug 13, 1985, Cairo, EGYPT                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Phone:</b> 01062984222                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Email:</b> <a href="mailto:amr.ahmed@eng.asu.edu.eg">amr.ahmed@eng.asu.edu.eg</a>                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Degrees Hold:</b> Assistant Professor                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>PhD: Field:</b>                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
|                                                                                                                                                                                                                   | <ul style="list-style-type: none"><li>• PhD in the virtual simulation field/design and production engineering department, Faculty of Engineering, Ain Shams University (June 2015).</li><li>• PhD thesis titled: “Simulation approach to evaluate the performance of a milling machine based on the accuracy of the milling products”.</li></ul> |                                                                                     |
| <b>MSc:</b> M.sc in the CAD/CAM/CNC field /design and production engineering department, Faculty of Engineering, Ain Shams University (Oct2010).<br>M.sc thesis titled: “Advanced techniques in CNC programming”. |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>BSc:</b> B.Sc in mechanical engineering, design and production engineering department, faculty of engineering, Ain Shams University (July 2007).                                                               |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Previous occupations and Experience:</b>                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Academic Title:</b> <ul style="list-style-type: none"><li>• Assistant Professor in Mechanical engineering, title awarded by Ain Shams University, Cairo, June 2015.</li></ul>                                  |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Post Graduate and Research Activities:</b>                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Authored Books:</b>                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Published Papers:</b>                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Other Socio Academic Activities:</b>                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>Current Position:</b>                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |

# RESIDENT EXPERT CURRICULUM VITAE

## Proposed role in the project:

1. **First name:** Nessren      **Middle:** Mohamed      **Family:** Zamzam
2. **Date of birth:** 11/9/1986
3. **Nationality:** Egyptian
4. **Education:**

| Institution<br>[ Date from - Date to ] | Degree(s) or Diploma(s) obtained:                                                          |
|----------------------------------------|--------------------------------------------------------------------------------------------|
| 2004 - 2009                            | B.Sc. in Mechanical Engineering- Production section                                        |
| 2009 - 2012                            | M.Sc. in Mechanical Engineering- Production section- Industrial Engineering specialization |
| 2013 - 2016                            | Ph.D. in Mechanical Engineering- Production section- Industrial Engineering specialization |

5. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

| Language | Reading | Speaking | Writing |
|----------|---------|----------|---------|
| Arabic   | 1       | 1        | 1       |
| English  | 2       | 2        | 2       |
|          |         |          |         |
|          |         |          |         |

6. **Membership of professional bodies:** Syndicate of Engineers
7. **Other Skills:** Good in MATLAB, Microsoft Office
8. **Present Position:** Lecturer at faculty of engineering ain shams university
9. **Key Qualifications:** Assembly Line Balancing- Meta Heuristic techniques
10. **Specific Local Experience:**

| Service Activity                                                      | Date from - Date to |
|-----------------------------------------------------------------------|---------------------|
| Balancing time and effort of assembly line in air conditioner factory | 2015-2016           |
| Balancing time and effort in electrical distribution panel factory    | 2014-2015           |
|                                                                       |                     |

11. **Specific International Experience:**

| Country | Service Activity | Date from - Date to      |
|---------|------------------|--------------------------|
| Germany | Training         | 15/12/2015 to 19/12/2015 |
| Sweden  | Training         | 27/5/2016 to 3/6/2016    |
|         |                  |                          |



## 12. Professional Experience:

### Should include and present:

- No. of years of general professional experience.
- No of years of experience relevant to the field of service applied for.
- List of previous assignments performed by the experts outside IMC (3 in every required field of Registration is optimum)
- List of previous assignments performed by the experts for IMC if applicable (3 in every required field of Registration is optimum)

| Date from -<br>Date to | Country | Company Served          | Position/Assignment   | Description |
|------------------------|---------|-------------------------|-----------------------|-------------|
| 2009-2016              | Egypt   | Ain shams<br>university | Lecturer<br>assistant |             |
| 2016                   | Egypt   | Ain shams<br>university | Lecturer              |             |
|                        |         |                         |                       |             |
|                        |         |                         |                       |             |

## 13. Other Relevant Information (e.g. Publications)

Balancing Physical Effort of Multi-Manned Assembly Lines

Multi-Manned Assembly Line Balancing Using Genetic Algorithm

Software for Generating Modified Helical Gears

## **Curriculum Vitae**

### **1. Personal Information**

**Name:** Nahid Hussein Afia Abdel Halim

**Academic Rank:** Professor

Department: Design & Production Engineering

College: Engineering

University: Ain Shams

**E-mail:** nahidafia@gmail.com&nahid\_abdelhalim@eng.asu.edu.eg

**Tel.:**

**Mobile:** 01222404879/01222404896/01025553770



### **2. Academic Background**

#### **Career History:**

##### ***May 1978 - December 1984***

Demonstrator, Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt.

##### ***December 1984 - February 1992***

Assistant Lecturer, Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt.

##### ***May 1990 - November 1990***

Fellowship, Berlin, Germany, Technical Institute of technology

##### ***February 1992- 2008***

**Assistant professor**, Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt.

##### ***2008-2013***

**Associate professor**, Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt.

##### ***November 2013- Present***

**Professor**, Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt.

### **3. Employment (Academic and Industrial) History**

| From      | To        | Rank                | Dept, Institution - Country                                                       |
|-----------|-----------|---------------------|-----------------------------------------------------------------------------------|
| May 1978  | Dec. 1984 | Demonstrator        | Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt. |
| Dec. 1984 | Feb. 1992 | Assistant Lecturer  | Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt. |
| May 1990  | Nov. 1990 | Fellowship          | Berlin, Germany, Technical Institute of technology                                |
| 2008      | 2013      | Associate professor | Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt. |
| Nov. 2013 | Present   | Professor           | Design and Production Eng. Dept., Faculty of Eng., Ain Shams Univ., Cairo, Egypt. |

### **4. Teaching Experience**

| From     | to        | Course(s)                                                                                                                                     | Level                               | Dept, Institution - Country                                                                    |
|----------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------|
| May1978  | Dec. 1984 | Industrial Organization,<br>Theory of Metal forming,<br>Theory of Metal Cutting,<br>Production Technology,<br>Work study and Plant<br>Layout. | Under-<br>Graduate                  | Design and Production Eng. Dept., Faculty of Eng.,<br>Ain Shams Univ., Cairo, Egypt.<br><br>// |
| Dec.1984 | Feb. 1992 | Industrial Organization,<br>Theory of Metal forming,<br>Theory of Metal Cutting,<br>Production Technology,<br>Work study and Plant<br>Layout. | Under-<br>Graduate                  | <br><br>//                                                                                     |
| May 1990 | Nov.1990  | Industrial Organization,<br>Work study and Plant<br>Layout, Engineering<br>Economy, Marketing.                                                | Under-<br>Graduate                  | <br><br>//                                                                                     |
| 2008     | 2013      | Industrial Organization,<br>Work study and Plant<br>Layout, Engineering<br>Economy, Marketing,<br>Consumer Behavior.                          | Under-<br>Graduate/Post<br>Graduate | <br><br>//                                                                                     |
| Nov.2013 | Present   | Industrial Organization,<br>Work study and Plant<br>Layout, Engineering<br>Economy, Marketing.                                                | Under-<br>Graduate                  |                                                                                                |

## **5. Research Experience**

### **a- Research interest:**

**Industrial Engineering**  
**Production Engineering**

### **b- Supervised students:**

| # of students | Degree | Major                     | Institution, Country                               | Status (complete, ongoing) |
|---------------|--------|---------------------------|----------------------------------------------------|----------------------------|
| 1             | MSc.   | Design and Production Eng | Faculty of Eng., Ain Shams Univ.,<br>Cairo, Egypt. | Ongoing                    |
| 3             | PhD    | Design and Production Eng | Faculty of Eng., Ain Shams Univ.,<br>Cairo, Egypt. | Ongoing                    |

\*\*\* There were 11 completed MSc. And PhD. Students mentioned below.

### **c- Research Projects/Grants:**

| No. | Research Title                                                                       | Duration | Grants (LE) | Co-investigator(s) |
|-----|--------------------------------------------------------------------------------------|----------|-------------|--------------------|
| 1   | Industrial Engineering and<br>Management Science TEMPUS<br>Project (ASU-team member) | 3 years  | L.E.9000000 |                    |
|     |                                                                                      |          |             |                    |

## **6. Publications**

### **a- total number of publications**

| Publication: | Patent | Journal papers | Conference Papers | Workshop | Abstract/ Discussion | Reports | Books | Total no. |
|--------------|--------|----------------|-------------------|----------|----------------------|---------|-------|-----------|
| No.          |        | 15             | 11                |          |                      |         |       | 26        |

*b- Samples of the most Recent Refereed Journal Papers (max of 5 in the past 5 years):*

| # | Paper Title                                                                                                           | Journal                                                                                             | Issue, Vol., pp.                                                                                               |
|---|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1 | Design of Supply Chain Networks with Supply Disruptions using Genetic Algorithm                                       | Online at <a href="http://mpra.ub.uni-muenchen.de/58062/">http://mpra.ub.uni-muenchen.de/58062/</a> | MPRA Paper No. 58062, posted 22. August 2014 05:09 UTC                                                         |
| 2 | Scheduling and sequencing in four machines robotic cell: Application of genetic algorithm and enumeration techniques” | Ain Shams Engineering Journal                                                                       | <a href="http://dx.doi.org/10.1016/j.asej.2012.11.002">http://dx.doi.org/10.1016/j.asej.2012.11.002</a> (2013) |
| 3 | A Genetic Algorithm Approach for Multi- Objective Multi Period Supply Chain Network Design”,                          | Mataria Engineering Research Journal                                                                | December 2012 Volume 136,pp 48-65                                                                              |
| 4 | A Genetic Algorithm for solving two-sided assembly line balancing problems”                                           | Ain Shams Engineering Journal                                                                       | (2011) 2, 227–240                                                                                              |

*c- Samples of the most Recent Conference Papers(max of 5 in the past 5 years):*

| # | Paper Title | Conference | Place, Date, pp. |
|---|-------------|------------|------------------|
|---|-------------|------------|------------------|

|   |                                                                                                              |                                                                                 |                                                        |
|---|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|
| 1 | “Mixed-model two-sided assembly line balancing using a Modified Genetic algorithm”,                          | International conference on Industrial Engineering and Operations Management    | Proceedings of Istanbul, Turkey, July 3-6, 2012        |
| 2 | Reconfigurable Capacity Management for Cost Minimization                                                     | 8th International Conference on Production Engineering& Design for Development, | PEDD8, Cairo, March 9-10, 2010.                        |
| 3 | Time and Space Two-sided Assembly Line Balancing Problem”                                                    | 23 <sup>rd</sup> Annual conference, Chicago, Illinois, USA.                     | (April, 2012) POMS                                     |
| 4 | A Heuristic A Heuristic Algorithm for Two Sided Assembly Line Balancing",                                    | 8th International Conference on Production Engineering& Design for Development, | PEDD8, Cairo, March 9-10, 2010.                        |
| 5 | Integrating Advanced Quality Techniques to Improve the Quality of Glass Tubes: A Case Study”,.               | 2nd International Conference on Economics Marketing and Management              | ( 2013) , DOI: 10.7763/IPEDR. 2013. V59. 38 pp183- 189 |
| 6 | Design of Supply Chain Networks with Supply Disruptions using Genetic Algorithm.                             | Proceedings of the POMS 25th Annual conference                                  | (2014).                                                |
| 7 | Multi-Objective Supply Chain Network Design Under Demand Uncertainty Using Robust Goal Programming Approach. | IEOM International Conference on Operation Excellence and Service Engineering   | Orlando,Florida,USA, September 10-11, 2015             |

*d. Reference Books (authored or edited)*

| # | Book Title | Authored/Edited | Publication Year |
|---|------------|-----------------|------------------|
| 1 |            |                 |                  |

|   |  |  |  |
|---|--|--|--|
| 2 |  |  |  |
|---|--|--|--|

### **7. Affiliation, Scientific and Professional Membership**

Vice President of the Industrial and Logistics Operation Management Society (ILOMS)

### **8. Statement of teaching**

#### **Practical and Professional Courses:**

- ✓ Engineering Economy.
- ✓ Industrial Organization.
- ✓ Plant Layout.
- ✓ Operation Management.
- ✓ Work Study.
- ✓ Marketing.
- ✓ Project Management
- ✓ Consumer Behavior Analysis

#### **I shared in teaching new program courses:**

- a) Engineering Economy
- b) Introduction to Marketing
- c) Industrial Organization

### **Academic Co-Supervision**

- 1) M.Sc. Thesis titled: Production Scheduling in Automated Manufacturing Systems (2003).
- 2) Ph.D Thesis titled: Reverse Logistic Network Design (2008).
- 3) Ph.D Thesis titled: Supply Chain Network Design (2009).
- 4) M.Sc. Thesis titled: Reconfigurable Manufacturing systems for agility (2009)
- 5) M.Sc. Thesis titled: Common Cycle and Cyclic Scheduling in Job Shop Production Systems (2010).
- 6) M.Sc. Thesis titled: Two Sided Assembly Line Balancing Problem (2010).
- 7) M.Sc. Thesis titled: Scheduling of Numerically Controlled Hoist Handling Systems (2011).
- 8) M.Sc. Thesis titled: Production Scheduling in Cellular Manufacturing (2011).
- 9) M.Sc. Thesis titled: Mixed Model Assembly Line Balancing (2011)
- 10) M.Sc. Thesis titled: Application of Multi Objective Optimization Model for Supply Chain Network Design (2012)

11) Ph.D. Thesis titled: Multi Criteria Facility Layout

12) Ph.D. Thesis titled: Multi manned assembly line balancing (2016)

13) Ph.D. Thesis titled: Logistics Operations Scheduling in Port Terminals (2017)

**I shared also in many projects with undergraduate students :**

- 1) Improving Manufacturing Techniques and procedures of Kader Factory for developed Industries.
- 2) Improving Manufacturing Techniques and Procedures of Kader Factory for Developed Industries.
- 3) Technical and Financial Study for the establishment of Orthopedic Implants Factory.
- 4) Production Improvement and Application of Lean Manufacturing in an Engineering Industry.
- 5) Application of Lean Manufacturing in Textile Industry.
- 6) Application of Lean Manufacturing Concepts at Air Conditioning Unit Production Factory (UnionAire).
- 7) Design of Balanced Assembly Line for Electric Distribution Panels at ABB.
- 8) Failure Mode Analysis for Improving Production Line Operability at PepsiCo Company.
- 9) Application of Total Productive Maintenance to Bottles Filling Line at PepsiCo.
- 10) Production Planning and Control Study at EGEMAC for electrical distributors.
- 11) Improving Production Performance at ABAZA Manufacturing Factory.
- 12) Using SCOR Model for Supply Chain Analysis and Design.
- 13) Lean Manufacturing in Cable Harnesses Industry.
- 14) Design of a Balanced Assembly Line for Electric Distribution Panels at ABB.
- 15) Development of Production Systems in Arab American Vehicles Company (AAV).
- 16) Design of a Medium Voltage Control Panel Assembly Line at Schneider Company.
- 17) Mixed Model Assembly Line Balancing of Panels Assembly Workshop at ABB Company in Egypt.
- 18) Using SCOR model for supply chain analysis and design.
- 19) Application of lean concepts on orthopedic implants.
- 20) Design of medium voltage control panel assembly line at Schneider Company.
- 21) Production planning and control study at EGEMAC for electrical distributors.
- 22) Application of Total Productive Maintenance System to bottles filling line Pepsico.
- 23) Applying lean concepts to improve heaters production operations at Olympic heaters.
- 24) Balancing of BYD automotive assembly line.
- 25) Application of lean manufacturing in cable harness industry.

- 26) Scheduling and materials requirement planning at PetroJet (Kattamia Central Workshops).
- 27) تطبيقات التصنيع الرشيق فى الصناعة
- 28) محاكاة سلاسل الأمداد الصناعية
- 29) محاكاة شبكة توزيع الوقود
- 30) Improving Productivity of Home Appliances Manufacturing: Case Study
- 31) Production Optimization of High Voltage Transformers.
- 32) A Case Study on the Application of Lean Principles in Coca-Cola Factory.
- 33) Productivity Improvement in Leoni Wiring Systems Plant.
- 34) Application of Lean Manufacturing in Electrical Distribution Panel Manufacturing.
- 35) Mixed Model of Two Sided Assembly Line in Automotive Industry.
- 36) Production Planning and Control in Garments Industry.
- 37) Factory Redesign with Application to Engineering Industry.
- 38) Productivity Improvement for Confection Industry.
- 39) Raising the Productivity of Plastic Molding Industry using Lean Concepts.

### **Publications:**

- 1) **N.Afia, M.I.Etman,** " A Developed Hybrid Genetic Approach for the Facility Layout Problem", Al Azhar Engineering 7<sup>th</sup> international conference Cairo 7-10 April 2003.
- 2) **N.Afia,** " A Developed Hybrid Genetic Approach for Manufacturing cell Formation", Al Azhar Engineering 8<sup>th</sup> international conference Cairo December 2004.
- 3) **N.Afia,** "Multi Objective Manufacturing cell Formation", Production Engineering& Design for Development, PEDD7, Cairo, February 2006.
- 4) **N.Afia, S.Yomna, Elkhartotely,** "Production scheduling in Automated Manufacturing Systems", 37<sup>th</sup> international conference on computers and Industrial Engineering, Alexandria 2007.

**N.Afia, M. Elsayed, Elkhartotely,** "A Stochastic model for forward Reverse Logistics Network design under Risk", 37<sup>th</sup> international conference on computers and Industrial Engineering, Alexandria 2007.



- 5) **El-Sayed M., Afia N., El-Kharbotly A.**, A stochastic model for forward–reverse logistics network design under risk. Computers & Industrial Engineering 2008; doi:10.1016/j.cie.2008.09.040.  
**N.Afia, M. Elsayed, Elkharbotely**, "A Stochastic model for forward Reverse Logistics Network design under Risk", 37<sup>th</sup> international conference on computers and Industrial Engineering, Alexandria 2007.
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- 11) **GhadaShedid, A.K. El-kharbotly, M. Elbeheiry, N.H.Afia,** " Reconfigurable Capacity Management for Cost Minimization", 8<sup>th</sup> International Conference on Production Engineering& Design for Development, PEDD8, Cairo, March 9-10, 2010.
- 12) **Tamer A. Ismail, Amin K.ElKharbotly and NahidH.Afia,**" A Heuristic Algorithm for Hoist Scheduling in Electroplating Lines ", Al-Azhar Engineering Eleventh International Conference, December 21-23, 2010.

- 13) **R. Taha, Y. Sadek , N. Afia And A. El-Kharbotly**, " A Survey on the Assembly Line Balancing Problems Solution Approaches and Techniques" ", Al-Azhar Engineering Eleventh International Conference, December 21-23, 2010.
- 14) **Raghda B. Taha \*, Amin K. El-Kharbotly, Yomna M. Sadek, Nahid H. Afia**, “ A Genetic Algorithm for solving two-sided assembly line balancing problems” , Ain Shams Engineering Journal (2011) 2, 227–240
- 15) **Raghda B. Taha, Amin El-Kharbotly, NahidAfia, YomnaSadek**, “Mixed-model two-sided assembly line balancing using a Modified Genetic algorithm”, Proceedings of 2012 International conference on Industrial Engineering and Operations Management Istanbul, Turkey, July 3-6, 2012
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- 21) **Raghda Taha, Yomma Sadek, Amin ElKharbotly, Nahid Afia and Khaled Abdallah**, “Multi-Objective Supply Chain Network Design Under Demand Uncertainty Using Robust Goal Programming Approach” **IEOM International Conference on Operation Excellence and Service Engineering, Orlando,Florida,USA, September 10-11, 2015**
- 22) **Nessren Zamzam, Yomna Sadek, Nahid Afia, Amin El-Kharbotly**, “Multi-Manned Assembly Line Balancing Using Genetic Algorithm”**International Journal of Engineering Research & Technology IJERT, Volume 4, Issue 12, December**

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- 23) Nessren Zamzam, Yomna Sadek, Nahid Afia, Amin El-Kharbotly, “ Balancing Physical Effort of Multi-Manned Assembly Lines Using Genetic Algorithm” 1<sup>st</sup> International conference on Material Science & Engineering, Banha University, February 22-23, 2016**
- 24) T. Ismail, M.Elbeheiry, K.Abdalla, A. Elkharbotly and N. Afia “A Genetic Algorithm for Continuous Berth Scheduling in Port Terminals” 1st International conference on Material Science & Engineering, Banha University, February 22-23, 2016**
- 25) M.S.Al-Ashhab, NahidAfia and Lamia A.Shihata “ Objective Effect on the Performance of a Multi-Period Multi-Product Production Planning Optimization Model” International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol:16, No:03, 2016**
- 26) T. Ismail, M.Elbeheiry, K.Abdalla, A. Elkharbotly and N. Afia “Continuous Berth Scheduling in Port Terminals” International Journal of Engineering Research & Technology (IJERT) <http://www.ijert.org> ISSN: 2278-0181 IJERTV5IS090473 Vol. 5 Issue 09, September-2016**
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**Ramadan Badawy El Gamasy**

Assistant professor  
design and production dept.

Mechanical section.

Faculty of Engineering Ain shams university.

12 Ahmed Elsayed Ghunim st., Ain Shams , Cairo, Egypt

Phone: + (20100) - 5066892 (mobile) / + (202) - 26622004 (Home)

E-mails: [elgamsy\\_ramadan@yahoo.com](mailto:elgamsy_ramadan@yahoo.com)  
[elgamsy\\_ramadan@eng.asu.edu.eg](mailto:elgamsy_ramadan@eng.asu.edu.eg)

## EDUCATION

**PH.D. in Materials Engineering (2012).**

Ain-Shams University, Cairo, Egypt.

Thesis Title: **(Mechanical Behaviors of Composite Materials from Natural Fibers).**

- **Courses:**

1. Advanced Composite materials.
2. Mechanical metallurgy.
3. Advanced metallurgy.

**(M.Sc.) in Materials Engineering (2006).**

Ain-Shams University, Cairo, Egypt.

Thesis Title :**(Mechanical Behaviors of Sandwich Composite Materials).**

- **Courses:**

1. Microstructure of Metals.
2. Metal Forming Machines.
3. Materials Strengthening.

**B.Sc. in Design & Production Engineering (1999).**

Ain-Shams University Cairo, Egypt .

## EXPERIENCES

**Coca Cola Egypt**

Training in diesel engines maintenance 1995.

**Ain Shams University training.**

Design and manufacturing hydraulic press with 30 ton capacity 1996 in faculty of engineering Ain Shams University.

**T.U Berlin Institute of Metallurgy(Germany)**

The training which carried out in Germany was in Heat treatments of steels, aluminum copper alloys and metallurgical training.

**Kader factory in machining work shop in 1998.**

Training was about machining and heat treatment.

**T.U Clausthal Institute of Metallurgy in 2002(Germany).**

The experimental work for the master was carried out in Germany in Clausthal University, including producing sandwich sheets which contain one layer from polypropylene surrounded by two layers from stainless steel.

**Using Marc Mentat 2000:**

Using Marc Mentat program to estimate the mechanical behavior of sandwich composite materials.

**Plastics experiments:**

Recycle of plastics and injection molding machines.

**Polymeric natural composite materials:**

Manufacturing composite materials from polymers and natural fibers.

**Trust Company For Engineering supplying.**

Manufacturing and heat treatment of spare parts of machines.

Supplier for Misr Elnour for Marble and Granite, Misr Elnour U.P.V.C for Plastic pipes, Misr Elnour for Plastic package, Nassar P.V.C for Plastic pipes and Elswedy High Energy.

**Courses attended**

**Training provider.**

- “Communication Skills” at Ain Shams University – Faculty and Leadership Development Project [FLDP].(2003)
- “Scientific Research Methods” at [FLDP].(2007)
- “Making Decisions and Problems Solving” at [FLDP].(2007)
- “Thinking Skills” at [FLDP].(2007)
- “Examination Systems & Students Evaluation” at [FLDP].(2010)
- “International Publication” at [FLDP].(2010)
- “Scientific Conferences Preparation”
- at [FLDC]. The faculty and leadership development center at
- Cairo University. (2010)
- “Strategic planning” at [FLDC]. (2012)
- “Communication Skills in Different Teaching Styles” at [FLDC].(2012)

- “Credit Hours System” at [FLDC].(2012)

## Research Experience

### Research interest:

- 1- Materials behavior
- 2- Metallurgy.
- 3- Materials selection
- 4- Heat treatment of steels.
- 5- Standards
- 6- Renewable Materials
- 7- Recycling.
- 8- Polymeric Composite Materials.

### Research Projects/Grants:

| No. | Research Title                                | Duration | Grants     | Co-investigator(s)                    | Funding source       |
|-----|-----------------------------------------------|----------|------------|---------------------------------------|----------------------|
| 1   | Producing of Wind Turbine Blade.              | 1 Years  | 25,000 EUR | Prof. Dr. Mohammed Hazem Abd El-Latif | RDI                  |
| 2   | Development of Polymeric Composite Materials. | 2 Years  | 160,000 EP | Prof. Dr. Mohammed Hazem Abd El-Latif | Ain Shams University |

### Publications

Total number of publications

| Publication: | Patent | Journal papers | Conference Papers | Workshop | Abstract/ Discussion | Reports | Books | Total no. |
|--------------|--------|----------------|-------------------|----------|----------------------|---------|-------|-----------|
| No.:         |        | 2              | 4                 |          | 1                    |         |       | 3         |

### Samples of the most Recent Refereed Journal Papers.

| # | Paper Title                                                                                              | Journal                                                    | Issue, Vol., pp.                               |
|---|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| 1 | Influence of Fiber and Matrix Modifications on The Mechanical Properties of Natural Composite Materials. | Al-Azhar                                                   | Vol. 7, No. 25, October, 2012, 1775-1788       |
| 2 | PP Reinforced with Recycled and treated rubber particles                                                 | International Journal of Mechanical Engineering            | Vol 4 no 8 August 2016 page 84-88              |
| 3 | Mechanical Behaviour of HDPE Reinforced with H <sub>2</sub> SO <sub>4</sub> Treated rubber particles     | International Journal of Mechanical Engineering            | Vol 4 no 9 Septamper 2016 page 67-70           |
| 4 | Mechanical Properties of Metallic and Hybrid Polyurethane Foam Sandwich Composites                       | International Journal of Scientific & Engineering Research | Volume 7, Issue 12, December-2016 Page 975-983 |
| 5 | EFFECT OF ADDING BANANA PSEUDO STEM (BPS) ON THE MECHANICAL PROPERTIES OF ABS COMPOSITES                 | Journal of Al Azhar University Engineering Sector          | Vol. 13, No. 48, July 2018, Page1090-1098      |
| 6 | Assessment of the properties of PP composite with addition of recycled tire rubber                       | Ain Shams Engineering Journal Elsevier                     | In press                                       |

### Samples of the most Recent Conference Papers.

| # | Paper Title                                                                                          | Conference          | Place, Date, pp.                                                                        |
|---|------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------|
| 1 | Mechanical Behaviour of Sandwich Composite Materials.                                                | PEED. 7             | Design & Production Eng. Dept., Faculty of Engineering, Ain Shams University Egypt.2006 |
| 2 | Mechanical Behaviour of Low Density Polyethylene Composites Reinforced with Natural Fibers.          | ICNF2013            | 1st International Conference on Natural Fibers, Guimarães-Portugal.(Abstract.) 2013     |
| 3 | Mechanical Behaviour of HDPE Reinforced with H <sub>2</sub> SO <sub>4</sub> Treated rubber particles | ICESD               | International conference on environmental Science and development 2016 Cairo Egypt      |
| 4 | Mechanical Behaviour of HDPE                                                                         | 4 <sup>th</sup> FUE | FUE International conference                                                            |

|  |                             |  |                  |
|--|-----------------------------|--|------------------|
|  | Reinforced with Marble dust |  | Cairo Egypt 2016 |
|--|-----------------------------|--|------------------|

### **Affiliation, Scientific and Professional Membership**

General -Secretary of the “Egyptian Society for Engineering Innovations.”  
Member in “Renewable Materials group”. Design and production dept., Faculty of Engineering, Ain shams university

### **TEACHING EXPERIMENTS**

I am lecturer at design and production department, faculty of engineering Ain Shams University.

### **COURSES:**

Metallurgy, material tests, heat treatments, casting, welding, theory of metal forming, forming processes, forming machines, tool design and machining technology.

## **PERSONAL SKILLS**

**Mother tongue**                      **Arabic**

**Other language**                      **English**

- Very good in reading, writing and verbal skills.

**German**

- Fair in reading, writing and verbal skills.

**Technical skills**

- CNC machines programming.
- Auto-cad.
- MS-DOS, MS-Operating systems, MS-Office.
- Internet searching



**Additional skills**

- Creating trust through open and direct communications.
- Bear hard work under stress and meet dead lines.
- The ability to analyze data quickly and learn fast.
- The creativity to propose innovative solutions.
- The courage and self-confidence to tackle unfamiliar problems and go against the crowd when necessary.

**Interests**

- Reading, following science and technology evolution, self educating and traveling abroad.

**PERSONAL DATA**

- Date of Birth : 5th of Sep. 1976
- Nationality : Egyptian
- Marital Status : Married
- Military Status : Exempted

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**REFERENCES FURNISHED UPON REQUEST**