



# CURRICULUM VITAE

*Dr. Mamdouh Ibrahim Elamy Morsy*

*Department of Industrial Engineering,  
College of Engineering,  
Northern Border University, Arar, Saudi Arabia*



## • *Personal Information*

- **Date of Birth:** 04/01/1976
- **Nationality:** Egyptian
- **Marital Status:** Married, (3 children)
- **Religion:** Muslim
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## • *Current Occupation*

- Associate Professor in the Department of Production Engineering and Mechanical Design, Faculty of Engineering, Menoufia University, Egypt.
- Assistant Professor in the Department of Industrial Engineering, College of Engineering, Northern Border University, Kingdom of Saudi Arabia.

## • *Education and Academic Degrees*

- **Degree:** Ph.D. in Mechanical Design and Applied Mechanics (Dynamics of Machines)
- **Year:** June (2014)
- **Faculty:** Faculty of Engineering
- **University:** Minoufiya University
- **Thesis Title:** "Dynamic Analysis of a Rotating Composite Shaft".
  
- **Degree:** M.Sc. in Mechanical Design and Applied Mechanics
- **Year:** July (2007)
- **Faculty:** Faculty of Engineering
- **University:** Minoufiya University
- **Thesis Title:** "Dynamic Analysis of an Adhesive Bonded Joint for Composite Structures".
  
- **Degree:** B.Sc. in Production Engineering and Mechanical Design
- **Year:** May (2001)
- **Faculty:** Faculty of Engineering
- **University:** Minoufiya University

## • *Language & Computer Skills*

- English: very good (Reading/writing/speaking).
- ICDL Certificate.
- Programming Languages: FORTRAN and MATLAB.
- Finite Element Software's: ANSYS, SolidWorks and MATLAB.

## • *Teaching Experience*

- My teaching experience focuses on the specialty of mechanical engineering in the field of machine dynamics and robotics.
- Also, my teaching experience in industrial engineering specializes in the fields of industrial control & automation, and automation, & industrial robots.
- From 2016 until now: Assistant Professor in Industrial Engineering, Northern Border University, Kingdom of Saudi Arabia.
- From 2004 - 2007: Teaching assistant in the Department of Production Engineering and Mechanical Design, Faculty of Engineering, Menoufia University, Egypt.
- From 2007 - 2014: Assistant lecturer in the Department of Production Engineering and Mechanical Design, Faculty of Engineering, Menoufia University, Egypt.
- From 2014 - 2024: Assistant Professor, Department of Production Engineering and Mechanical Design, Faculty of Engineering, Menoufia University, Egypt.
- From 30/04/2024: Associate Professor, Department of Production Engineering and Mechanical Design, Faculty of Engineering, Menoufia University, Egypt.

## • *Teaching and Research Topics*

- Applied Mechanics
- Mechatronics
- Theory of Machines
- Dynamics of Machines
- Mechanical Design
- Machine Tool Design
- Engineering Drawing
- Mechanical Vibration
- Material Handling System Design
- Automatic Control
- Production Engineering
- Kinematics of Mechanisms and Robotics
  - Facilities Planning and Design
  - Human Factor Engineering
  - Engineering Mechanics
  - Maintenance and replacement policies
  - Materials Engineering
  - Modeling and Simulation of Dynamic Systems
  - Industrial Quality Control
  - Control and Industrial Automation.

- Probabilities and Statistics.
- Material handling and packing.
- Automation and robotics
- Industrial robots
- Machine dynamics
- Engineering ethics
- Industrial safety engineering
- Dynamics of Mechanisms and Robotics
- B. Sc project.

### • *Experience Certificates*

- Modern teaching strategies, Deanship of University Education Development, Northern Border University, from 27-28/02/2022 (10 hr).
- Formulating and measuring learning outcomes for academic programs, Deanship of University Education Development, Northern Border University, remotely, on 22/05/2022 (4 hr).
- Attending a workshop on evaluation methods according to the fields of learning, Deanship of University Education Development, Northern Border University, remotely, on 15/12/2022 (5 hr).
- Attending an electronic course on how to detect the impact factor and classify international journals using the digital library, Deanship of Library Affairs, Northern Border University, remotely, on 03/02/2021 (2 hr).
- Attending a workshop on learning outcomes in line with the National Qualifications Framework, Deanship of University Education Development, Northern Border University, remotely, on 08/12/2022 (5 hr).
- Attending a program on self-evaluation measures, performance indicators and benchmark comparisons, Deanship of University Education Development, Northern Border University, on 23/05/2022 (5 hr).
- Attending a training course on the description of (Programs, Courses, and Field experiences), Deanship of University Education Development, Northern Border University, on 14-16/04/2020 (6 hours).
- Attending a training course on (course report, field experience report, program annual report), Deanship of University Education Development, Northern Border University, on 21-23/04/2020 (6 hours).

### • *Certificates of Appreciation*

- Participation in the Second Student Guidance Forum, University Vice Presidency for Academic Affairs, Jazan University, remotely, on 29/03/2021.
- A certificate of appreciation for providing requirements and evidence and participating in academic accreditation sessions, the University Vice President for Development, Quality and Community Service, Northern Border University.
- A certificate of appreciation for participating in quality work for the industrial engineering program to obtain academic accreditation. ABET, President of the University. Northern Border University.
- A certificate of appreciation for participating in quality work for the industrial engineering program to obtain academic accreditation. ABET, Dean of the College of Engineering. Northern Border University.

- Certificate for participation in implementing a training program entitled (Occupational Safety and Health Management) as a community service on 9/19/2024 for one day at a rate of two hours, Northern Borders University, University Agency for Postgraduate Studies and Scientific Research.

### • *Participating committees*

- Member of the Board of the Department of Industrial Engineering, College of Engineering, Northern Border University
- Member of the Program Committee of the Department of Industrial Engineering, Northern Border University.
- Member of the Academic Schedules Committee for the Department of Industrial Engineering from 2016 to 2018.
- Member of the Student Guidance Committee for the Department of Industrial Engineering from 2016 to 2018.
- Member of the committee preparing exam schedules for the Department of Industrial Engineering from 2019 until now.
- Member of the Laboratories and Learning Resources Committee, Department of Industrial Engineering, Northern Border University.
- Member of the Quality and Academic Accreditation Committee, Department of Industrial Engineering, Northern Border University.
- Member of the Postgraduate Studies Committee of the Department of Industrial Engineering, Northern Border University.
- Member of the Academic and Student Activities Committee, Department of Industrial Engineering, Northern Border University.
- Member of the Scientific Research Committee of the Department of Industrial Engineering, Northern Border University.
- Member of the Performance Measurement Committee, College of Engineering, Northern Border University.

### • *Community Service*

- Participation in implementing a training program entitled (***Occupational Safety and Health Management***) as a community service on 9/19/2024 for one day at a rate of two hours, Northern Borders University, University Agency for Postgraduate Studies and Scientific Research.
- Participation in implementing a training program entitled (***Industrial Robotics***) as a community service on 12/12/2024 for one day at a rate of two hours, Northern Borders University, University Agency for Postgraduate Studies and Scientific Research.

### • *Participated conferences*

- 12<sup>th</sup> International Conference on APPLIED MECHANICS & MECHANICAL ENGINEERING, Military Technical College, May 29-31, **2007**.
- 13<sup>th</sup> International Conference on APPLIED MECHANICS & MECHANICAL ENGINEERING, Military Technical College, May 27-29, **2008**.
- The 4<sup>th</sup> International Conference Mechatronic Systems and Materials, MSM 2008, Bialystok, Poland, July, 14-17, 2008.
- 13<sup>th</sup> Conference on Fracture Mechanics - ***Opole, POLAND***, 05 – 07 September **2011**.

- 14th International Conference on AEROSPACE SCIENCES & AVIATION TECHNOLOGY ASAT 14 – Military Technical College, Cairo, EGYPT, May 24 – 26, 2011.
- 15th International Conference on AEROSPACE SCIENCES & AVIATION TECHNOLOGY ASAT 15 – *Military Technical College*, Cairo, EGYPT, May 28 – 30, **2013**.
- 6th International Conference on Trends in Mechanical and Industrial Engineering (ICTMIE'2015), Sept. 13-14, 2015 Dubai (UAE).
- The International Conference of Engineering Sciences& Applications, Aswan, Egypt, January, 28-31, 2016.
- ICEEP 2018: 20th International Conference on Environmental Engineering and Protection, January, 22-23, 2018 at Dubai, (UAE).

### • *Recent Publications*

1. Hamada, A. A., Ghoneam, S. M. and *EL-Elamy, M. I.*, "Dynamic Analysis of an Adhesive Bonded Joint for Composite Structures", 12th International Conference on APPLIED MECHANICS & MECHANICAL ENGINEERING, Military Technical College, May 29-31, **2007**.
2. Ghoneam, S. M., Hamada, A. A. and EL-Elamy, M. I., "Dynamic Response of an Adhesive Bonded Joint for Composite Structure", 13th International Conference on APPLIED MECHANICS & MECHANICAL ENGINEERING, Military Technical College, May 27-29, 2008.
3. Ghoneam, S. M., Hamada, A. A. and *EL-Elamy, M. I.*, " Experimental and Analytical Investigations of the Dynamic Analysis of Adhesively Bonded Joints for Composite Structures" The 4th International Conference Mechatronic Systems and Materials, MSM **2008**, Bialystok, Poland, July, 14-17, **2008**.
4. S. M. Ghoneam, A. A. Hamada and *M. I. EL-Elamy*," Dynamic Analysis of Cracked Composite Shafts", 13th Conference on Fracture Mechanics - *Opole, POLAND*, 05 – 07 September **2011**.
5. S. M. Ghoneam, A. A. Hamada and *M. I. EL-Elamy*," Dynamic Analysis of a Rotating Composite Shaft", 14th International Conference on AEROSPACE SCIENCES & AVIATION TECHNOLOGY ASAT 14 – *Military Technical College*, Cairo, EGYPT, May 24 – 26, **2011**.
6. S. M. Ghoneam, A. A. Hamada and *M. I. EL-Elamy*, "The Effect of Stacking Sequence and Coupling Mechanisms on Eigen-Nature of Composite Shafts", 15th International Conference on AEROSPACE SCIENCES & AVIATION TECHNOLOGY ASAT 15 – *Military Technical College*, Cairo, EGYPT, May 28 – 30, **2013**.
7. K. M. Khader, *M. I. EL-Elamy*, "Using Composite Materials for Improving Wind Turbine Performance", 6th International Conference on Trends in Mechanical and Industrial Engineering (ICTMIE'2015), *Sept. 13-14, 2015* Dubai (UAE).
8. Y. Rihan, S. Ayyad, and *M. I. Elamy*, "A Study on the Residual Stresses in Resistance Spot Welding", *I-manager's Journal on Material Science*, Vol. 3 1 No. 2 1 July - September **2015**
9. M. S. EL-Wazerya, *M. I. Elamy*, and S. H. Zoalfakar, "Experimental Investigation on the Mechanical Behavior of Glass Fiber Reinforced Polyester Resin Composite" *The International Conference of Engineering Sciences& Applications, Aswan, Egypt, January, 28-31, 2016*.

10. A. M. Easa and **M. I. Elamy**, "Influence of Drilling Parameters and Volume Fraction Ratios on Hole Quality of (GFRP) Composites", *International Journal of Advanced Engineering and Global Technology*, Vol-04, Issue-03, 1904 – 1911, May, **2016**.
11. A. M. Easa, **M. I. Elamy** and A. S. Esia, "Analysis of Surface Integrity in Drilling of GFRP Composite When Using Two Types of Cutting Tools and Different Volume Fraction Ratios ", *International Journal of Advanced Engineering and Global Technology*, Vol-04, Issue-04, 2080 – 2087, August, **2016**.
12. A. M. Easa, **M. I. Elamy** and A. S. Esia,, " Analyzing the Effect of Machining Parameters and Fiber Orientation on the Surface Roughness during Drilling of (GFRP) Composites", *International Journal of Advanced Engineering and Global Technology*, Vol-02, Issue-05, 1523-1531, March, **2017**.
13. N. M. Mohamed, M. S. EL-Wazery, **M. I. EL-Elamy**, S. H. Zoalfakar, " Mechanical and Dynamic Properties of Hybrid Composite laminates", *International Journal of Advanced Engineering and Global Technology*, Vol-05, Issue-03, 1703-1725, May, **2017**.
14. MS El-Wazery, **MI El-Elamy**, SH Zoalfakar, "Mechanical properties of glass fiber reinforced polyester composites", *International journal of applied science and engineering*, 14 (3), 121-131, **2017**.
15. K. M. Khader, **M. I. EL-Elamy**, O. A. Nada, " Multi-criteria Selection and Improvement of Effective Design for Generating Power from Sea Waves", **ICEEP 2018: 20<sup>th</sup> International Conference on Environmental Engineering and Protection**, January, 22-23, **2018** at Dubai, (UAE).
16. K. M. Khader, **M. I. EL-Elamy**, " Power and Wear Reduction Using Composite Links of Crank-Rocker Mechanism with Optimum Transmission Angle", **ICEEP 2018: 20<sup>th</sup> International Conference on Environmental Engineering and Protection**, January, 22-23, **2018** at Dubai, (UAE).
17. O S, Hussiena, **M I, Elamy**, " Optimal Placement of Dampers on Multistorey Frames Using Dynamic Analysis ", *Strength of materials*, Vol. 3, 158-168, **2020**.
18. K. M. Khader, Shehab A. Mansour, Ibrahim M. El Fahham and **Mamdoh I. Elimy** , "Dynamic Performance Enhancement of Vertical Wind Turbine Using Composite Blades Reinforced by Zinc-Oxide Nanoparticles", *MANSOURA ENGINEERING JOURNAL*, (MEJ), Vol-45, Issue-03, 39-49, **2020**.
19. M. Gamila, W.M. Faroukb and **Mamdouh I. Elamy**, "Effect of Friction Stir Processing Parameters on the Mechanical and Dynamic Responses of AA5052-H32", *ENGINEERING RESEARCH JOURNAL (ERJ)*, Vol-51, Issue-02, 188-199, **2022**.
20. **Mamdouh I. Elamy**, "Dynamic Analysis of Rotating Continuous Drive Friction Welding Joints of Al alloy (6061AA) ", *ERJ Engineering Research Journal Faculty of Engineering Menoufia University*, Vol. 46, No. 1, pp. 43-53, January **2023**.
21. **Mamdouh I. Elamy**, "Improving the Dynamic Performance of the Crank-Rocker Mechanism Using Composite Links", *ERJ Engineering Research Journal Faculty of Engineering Menoufia University*, Vol. 46, No. 4, pp. 471-484, October **2023**.
22. Mohamed Fterich, **Mamdouh Ibrahim Elamy**, Ezzeddine Touti, and Hatem Bentaher, "Experimental and numerical study of tomatoes drying kinetics using solar dryer equipped with PVT air collector", *Engineering Science and Technology, an International Journal*, Vol. 47, 101524, **2023**.
23. Norah A. M. Alsaif, Hanan Al-Ghamdi, Z. Y. Khattari, M. S. Shams, R. A. Elsad, M. S. Sadeq, Adel M. El-Refaey, Y. S. Rammah, and **Mamdouh I. Elamy**, "Experimental and simulation investigation of the effects of Er<sup>3+</sup> ions on the

- physico-mechanical, optical, mechanical, and radiation-protective characteristics of B2O3-CaO-Bi2O3 glasses", *Journal of the Australian Ceramic Society*, Vol. 60, pp. (207–220), **2024**.
24. Hanan Al-Ghamdi, Norah A.M. Alsaif, Z.Y. Khattari, Yasser Rammah, R.A. Elsad, Zakia Alhashem, Hasna Alali, Ashraf Farha & **Mamdouh I. Elamy**, "Mechanical, electrical properties and gamma-rays buildup factors of CaO-Li2O-B2O3-As2O3 glasses: Significant role of As2O3", *Journal: Radiation Physics and Chemistry*, Vol. 215, 111355, February **2024**.
  25. Majed Masmali, **Mamdouh I. Elimy**, Mohamed Fterich, Ezzeddine Touti and Ghulam Abbas, "Comparative Studies on Load Frequency Control with Different Governors connected to Mini Hydro Power Plant via PSCAD Software", *Engineering, Technology & Applied Science Research*, Vol. 14, No. 1, (12975-12983), **2024**.
  26. Gharam A. Alharshan, Ahmed M. A. El-Seidy, **Mamdouh I. Elamy**, Islam M. Nabil, Adel M. El-Refaey, R. A. Elsad, M. S. Shams, A. M. Abdelghany, and Y. S. Rammah, "CeO<sub>2</sub> additive to bismo-borate glasses: synthesis, structure, physical characteristics, and radiation protection competence". *Journal of Materials Science: Materials in Electronics*, Vol. 35:862, pp. (1-14), **2024**.
  27. W.M. Farouk, Ahmed Mohamed, Wagih Marzouk, **Mamdouh I. Elamy**, Faiz Abo ghriba, Ahmed Abu-Oqail, Mohamed Abu-Okail. "Prediction analysis and an experimental investigation of precision process of CO<sub>2</sub>-laser micro-turning for Armax 500T accompanied via N<sub>2</sub> Gas", *Optics & Laser Technology*, Vol. 177, 111093, **October 2024**.
  28. **Mamdouh I. Elamy**, Wissam H. Alawee, Ali Basem, Suha A. Mohammed, A.S. Abdullah, Hasan Sh. Majdi, T. E. M. Atteya , Z.M. Omara, M.M. Younes, " An experimental comparison for thermos-economic performance of five different designs of solar stills", *Case Studies in Thermal Engineering*, Vol. 59, 104561, **July 2024**.
  29. **Mamdouh I. Elamy**, Fadl A. Essa, Ali Basem, Suha A. Mohammed, Wissam H. Alawee, A.S. Abdullah, Azher M. Abed, Z.M. Omara, W.M. Farouk, " Novel cylindrical solar still integrated with parabolic solar concentrators, vapor extraction fan, and nano-enhanced phase change material", *Desalination journal*, Vol. 585, **2024**.
  30. Gharam A. Alharshan, **Mamdouh I. Elamy**, Shimaa Ali Said, A.M.A. Mahmoud, Ragab A. Elsad4, Nasra M. Ebrahim, "Dielectric and gamma ray shielding properties of lead doped Lithium-zinc-borosilicate", *Journal of Electronic Materials*, Vol. 53 (9), pp. 5671-5681, **2024**.
  31. Gharam A. Alharshan, **Mamdouh I. Elamy**, Nasra M. Ebrahim, A.M.A. Mahmoud, Y.S. Rammah, R.A. Elsad, M. Hamed Misbah, Shimaa Ali Said, " Physical, structural, and optical characteristics of the glasses system based on lanthanum-doped phosphate", *Optical and Quantum Electronics*, Vol. 56 (1179), **2024**.
  32. **Mamdouh I. Elamy**, Suha A. Mohammed, Ali Basemd, Wissam H. Alawee, A.S. Abdullah, A. Aldabesh, Hasan Sh Majdi, Z.M. Omara, Fadl A. Essa, "Enhancing coiled solar still performance with vertical wick distiller, reflectors, nanomaterial-infused PCM, and condenser integration", *Case Studies in Thermal Engineering*, Vol. 61, **2024**, 104912.
  33. **Mamdouh I. Elamy**, Suha A. Mohammed, Ali Basem, Wissam H. Alawee, A. Aldabesh, A.S. Abdullah, Hasan Sh Majdi, Z.M. Omara, Fadl A. Essa, "Augmenting thermal performance in tubular solar stills: A multifaceted strategy with wick cords, integrated baffles, reflectors, and nano-PCM", *Results in Engineering*, Vol. 23, **2024**, 102771.
  34. **Mamdouh I. Elamy**, Fadl A. Essa, Suha A. Mohammed, Wissam H. Alawee, Ali Basem, A.S. Abdullah, Hasan Sh. Majdi, Hayder A. Dhahad, Z.M. Omara, Y. Gamiel, "Enhancing spherical solar still thermal performance with built-in baffles, reflectors, and nanoparticle phase change material", *Solar Energy*, Vol. 284, **2024**, 113060.
  35. Hossein Maleki, Parviz Asadi, Arman Sedghi, Naghdali Choupani, Amirhossein Moghanian, **Mamdouh I Elamy**, "(Alumina and graphene)/ PLA nanocomposites manufactured by digital light processing 3D printer", *Journal of Materials Research and Technology*, Vol. 32, pp. 3120-3134, **2024**.

36. Ayman Hoballah, Suha A Mohammed, Ali Basem, AS Abdullah, Wissam H Alawee, Hasan Sh Majdi, ZM Omara, **Mamdouh I Elamy**, Fadl A Essa, "*Improving the efficiency and productivity of solar distillation by creative design and heater and baffle integration*", *Results in Engineering*, Vol. 24, **2024**, 103210.
37. Gharam A Alharshan, **Mamdouh I Elamy**, Shimaa Ali Said, AMA Mahmoud, RA Elsad, Islam M Nabil, Nasra M Ebrahim, "*Effect of lanthanum oxide on the radiation-shielding, dielectric, and physical properties of lithium zinc phosphate glasses*", *Radiation Physics and Chemistry*, Vol. 224, **2024**, 112053.
38. **Mamdouh I Elamy**, Suha A Mohammed, Ali Basem, Wissam H Alawee, AS Abdullah, Hasan Sh Majdi, ZM Omara, Fadl A Essa, "*Optimizing cord pyramid solar distillers: A comprehensive study on square baffles, reflectors, and phase transition materials*", *Case Studies in Thermal Engineering*, Vol. 63, **2024**, 105304.
39. **Mamdouh I Elamy**, Mohamed Abd Elaziz, Mohammed Azmi Al-Betar, A Fathy, M Elmahdy, "*Enhanced random vector functional link based on artificial protozoa optimizer to predict wear characteristics of Cu-ZrO<sub>2</sub> nanocomposites*", *Results in Engineering*, Vol. 24, **2024**, 103007.
40. Nada Alfryyan, Norah A.M. Alsaif, Z.Y. Khattari, Hanan Al-Ghamdi, R.A. Elsad, M.S. Shams, Adel M. El-Refaey, A.S. Abouhaswa, **Mamdouh I Elamy**, Y.S. Rammah, "*PVC reinforced with Pb<sub>1/2</sub>Ni<sub>1/2</sub>Fe<sub>2</sub>O<sub>4</sub> spinel ferrites nanoparticles: Development of linear/nonlinear optical, dielectric characteristics and  $\gamma$ - rays buildup-factors of for optical and radiation safety applications*", *Optical and Quantum Electronics*, **Under publication, 2024**.
41. Moataz H Ata, GT Abdel-Gaber, Nasser Ahmed, Ahmed Abu-Oqail, **Mamdouh I Elamy**, WM Farouk, Mohamed Abu-Okail, "*An Investigation of Microstructural and Tribological Characteristics of an Innovative Hybrid Aa 1050/X Wt.% Ni+ Cu+ Fe Produced by Mechanical Mixing Accompanied by Additive*", **Under publication**.