Academic CV

Mohammed Gamil

Latest update: July, 2020

Personal:

Name: Mohammed Gamil Mohammed Abdelghany

Position: Assistant Professor

Affiliation: Mechanical Engineering Department, Shoubra, Faculty of Engineering, Benha University.

Born: 5th March 1983 (Monufia- Egypt)

Marital Status: Married

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ORCID: https://orcid.org/0000-0002-8866-5829

Education:

2011-2014 **Ph.D.** "Fabrication of High Sensitive Strain Gauge from Carbon-based Nanostructured Materials"
Materials Science and Engineering Department (MSE), Egypt-Japan University of Science and Technology (**E-JUST**), Egypt.
Supervisors:
Prof. Dr. Osamu Tabata, Kyoto University, Japan.
Prof. Dr. Ahmed Abd El-Moneim, E-JUST, Egypt.
Prof. Dr. Toshiyuki Tsuchiya, Kyoto University, Japan.
Prof. Dr. Koichi Nakamura, Kyoto University, Japan.
Associate Prof. Dr. Ahmed Rashad Fath El-Bab, E-JUST, Egypt.

2007-2010 **M.Sc.** "Some Investigations on Low Temperature Cast Carbon Steel"
Mechanical Engineering Department, Shoubra Faculty of Engineering, Benha University, Egypt.
Supervisors:
Prof. Dr. Taher Ahmed El-Bitar, Head of Metals Technology, Department, Central Metallurgical R&D Institute (CMRDI), Egypt.
Prof. Dr. Fouad Helmy Mahmoud, Benha University, Egypt.
Assoc. Prof. Dr. Ibrahim Mousa Ibrahim, Benha University, Egypt.

2000-2005 **BSc.** Mechanical Engineering (Production and Design Section) General grade Very Good (78.07%).

Research Area:

1. Nano-materials (Graphene and carbon nanotubes) for sensing applications (Mechanical and Physical Sensors).
2. Micro-electro-mechanical systems (MEMS)
3. Advanced Functional Metallic Materials (Design and Processing).
4. Nanocomposites.
5. Steel Processing and Heat Treatment

Publications:

1. **Mohammed Gamil** and Mohamed M.Z. Ahmed "Investigating the Thermo-mechanical properties of Aluminum/Graphene nano-platelets composites developed by Friction Stir Processing" International Journal of Precision Engineering and Manufacturing, **2020**. doi:10.1007/s12541-020-00355-3.

2. **Mohammed Gamil** and Taher El-Bitar,"Design and Manufacturing of a Non-Standard Chain Parts for a Scraper Chain Conveyor: A Case Study" key Engineering Materials, Vol. 786, pp 335-341, **2018**.

3. **Mohammed Gamil**, Ahmed M. R. Fath El-Bab, Ahmed Abd El-Moneim, and Koichi Nakamura, "Ultrahigh-sensitivity Graphene-based Strain Gauge Sensor: Fabrication on Si/SiO_2 and First-principles Simulation" Sensors and Materials, Vol. 30 No. 9(2), pp. 2085-2100, **2018**.

4. Sahour Sayed, **Mohammed Gamil**, Ahmed Fath El-Bab, Koichi Nakamura, Toshiyuki Tsuchiya, Osamu Tabata and Ahmed Abd El-Moneim , "Graphene Film Development on Flexible Substrate Using a New Technique: Temperature Dependency of Gauge Factor for Graphene-based Strain Sensors", Sensor Review, Vol. 36, pp. 140-147, **2016**.

5. S. Sayed, **M. Gamil**, F. El-Bab, M. Ahmed, A. El-Moneim, and A. A. El Moneim, "LASER Reduced Graphene on Flexible Substrate for Strain Sensing Applications: Temperature Effect on Gauge Factor," Key Engineering Materials, Vol. 644, pp. 115-119, **2015.**

6. **M. Gamil**, O. Tabata, K. Nakamura, A. M. El-Bab, and A. A. El-Moneim, "Investigation of a new high sensitive micro-electromechanical strain gauge sensor based on graphene piezoresistivity," Key Engineering Materials, Vol. 605, pp. 207-210, **2014**.

7. **M. Gamil**, K. Nakamura, F. El-Bab, M. Ahmed, O. Tabata, and A. Abd El-Moneim, "First-principles simulation on orientation dependence of piezoresistivity in graphene nanoribbon," International Conference on Engineering and Technology (ICET), IEEE Xplore Digital Library, pp. 1-6, **2014**.

8. **M. Gamil**, H. Nageh, I. Bkrey, S. Sayed, A. M. F. El-Bab, K. Nakamura, O. Tabata, and A. A. El-Moneim, "Graphene-Based Strain Gauge on a Flexible Substrate," Sensors and Materials, vol. 26, pp. 699-709, **2014**.

9. **M. Gamil**, K. Nakamura, A. M. F. El-Bab, O. Tabata, and A. A. El-Moneim, "Simulation of Graphene Piezoresistivity Based on Density Functional Calculations," Modeling and Numerical Simulation of Material Science, vol. 2013, **2013**.

10. **M. Gamil**, K. Nakamura, A. M. F. El-Bab, O. Tabata, M. Serry, and A. A. El-Moneim, "Evaluation of strain gauge factors of graphene ribbon models based on first-principles electronic-state calculations," in Innovative Engineering Systems (ICIES),First International Conference on Innovative Engineering Systems (ICIES), IEEE Xplore Digital Library, pp. 52-57, **2012**.

11. T. El-Bitar, **M. Gamil**, I. Mousa, and F. Helmy, "Development of carbon—Low alloy steel grades for low temperature applications," Materials Science and Engineering: A, vol. 528, pp. 6039-6044, **2011**.

12. **Mohammed Gamil**, N.M. Shaalan and Ahmed Abd El-Moneim "Graphene Nanoplatelets Resistance-Based Temperature Sensor" submitted to Microsystem Technologies, Under review, **2020**.

Research projects:

1. **Mohammed Gamil**, Mohamed Zaky "Enhancing the Thermal Conductivity of Aluminum Alloy 5052-H32 by adding Graphene nano-platelets Using Friction Stir Processing" Northern Border University, KSA (ENG-2018-3-9-F-7814).

2. Mohammd Tashkandi, **Mohammed Gamil** "Study the Effect of Graphene Addition to Aluminum Alloy 6061 by Continuous Drive Friction Welding" Northern Border University, KSA (ENG-2018-3-9-F-7785).

Professional Experiences:

2017 - Now	**Assistant Professor,** Mechanical Engineering Department, Collage of Engineering, Northern Border University, Saudi Arabia.
2014 - 2017	**Assistant Professor**, Mechanical Engineering Department, Shoubra Faculty of Engineering, Benha University, Egypt.
	Assistant Professor, Mechanical Department, Al-Ameeria Integrated Technical Education Cluster.
2013 - 2014	**Visiting researcher**, Department of Micro Engineering, Graduate School of Engineering, **Kyoto University**, **JAPAN**.
2010 - 2013	**Ph.D student** at Egypt-Japan University of Science and Technology (**E-JUST**).
2009 - 2010	**Lecturer**, Mechanical Engineering Department, Shoubra Faculty of Engineering, Benha University, Egypt.
2007 – 2009	**Research and teaching assistant**, Mechanical Engineering Department, Shoubra Faculty of Engineering, Benha University, Egypt.

Industrial Experiences

2005-2006 Working at **Emex** company for handling systems at 10th of Ramadan city.

2006-2007 Working at **Optical Technology** company for Micro-electro-mechanical systems at 10th of Ramadan city.

2007-2011 Private working in machine design and fabrication.

I have experience in the following:

1. Handling systems design and fabrication.
2. Motor control circuits design and fabrication.
3. PLC (Small compact units).
4. Liquid filling machines.
5. Sheet metal work.
6. Machining (Turning, milling, shaping, drilling, grinding …..etc)

Teaching Experience:

1. Mechanics (Statics + Dynamics)
2. Engineering Drawing
3. Probability and Statistics
4. Theory of Machines
5. Introduction to Manufacturing Processes
6. Manufacturing Processes Lab
7. Fundamentals of Materials Science
8. Materials Science Lab
9. Strength of Materials
10. Mechanical Vibrations
11. Mechanical Design (1)
12. Mechanical Design (2)
13. Pneumatic and Hydraulic Systems
14. Graduation Project (1)
15. Programmable Logic Controllers
16. Graduation Project (2)
17. Micro Electromechanical Systems (MEMS)

Languages:

Arabic The mother language

English TOEFL score 87 IBT (580 paper-based test) on 2013