

*Ahmed M. M. Ibrahim, Ph.D.*

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## ***Curriculum vitae***

*Ahmed Mohamed Mahmoud Ibrahim, Ph.D.*

Production Eng.& Mechanical design department

Faculty of Engineering, Minia University, Egypt

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### **PERSONAL:-**

**Full name:** Ahmed Mohamed Mahmoud Ibrahim  
**Sex:** Male  
**Title:** Ph.D., Assistant professor  
**Nationality:** Egyptian  
**Date of birth:** 23<sup>rd</sup> of May, 1985  
**Place of birth:** Kingdom of Saudi Arabia  
**Marital status:** Married  
**Military service:** Exempted  
**E-mail:** [ahmedkhalifa@mu.edu.eg](mailto:ahmedkhalifa@mu.edu.eg)  
**Home page:** <http://scholar.google.com/citations?user=3yEILAQAAAAJ&hl=en>

### **Education**

**Ph.D. in Mechanical Engineering (Tribology)**, Titled " Research on enhancing the tribological characteristics of NiAl self-lubricating composites using different solid lubricants", School of Mechatronic Engineering, Wuhan University of technology, China, 2016

**Doctoral courses in Mechanical Engineering**, School of Mechatronic

Engineering, Wuhan University of technology, China, 2013

**M.Sc. in Mechanical Engineering**, Titled " Investigation of some electrochemical machining parameters for internal conical shapes", (Production Eng.& Mechanical design), Faculty of Engineering, Minia University, Egypt, October 2011.

**Pre-masters studies in Mechanical Engineering**, Faculty of Engineering, Minia University, Egypt, 2008

**B.Sc. in Mechanical Engineering** (Production Eng.& Mechanical design), Faculty of Engineering, Minia University, Egypt, July 2007."ranked the first among 2007 graduated students".

**Areas of Interest:**

- ✚ Material science
- ✚ Tribology
- ✚ Friction
- ✚ Contact physics
- ✚ Lubrication
- ✚ Solid lubricants
- ✚ Self-lubricating composites
- ✚ Wear mechanisms
- ✚ Composite materials
- ✚ Material characterization
- ✚ Conventional machining processes
- ✚ Non-conventional machining processes
- ✚ Surface Engineering

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- ✚ Nano-Coatings
- ✚ Renewable Energy
- ✚ Wind Energy

### Academic Records:

**Mechanical professor in international joint program** ( May 2016, July 2017) at *Huzhou vocational and technical college*, Zhejiang province, **China**, *South Essex College*, **England**, *Hubei university of arts and science*, Hubei Province, **China**, *University of the sunshine coast*, **Australia**.

**Assistant Professor** (June 2016 till now) at Production Eng. Mechanical Design department, Faculty of Engineering, Minia University, Egypt.

**Research assistant, and Ph.D.** (2013 to June 2016) at Wuhan university of technology, and member of a research project funded from Chinese government.

**Assistant lecturer** (2011 to 2013) at Production Eng. Mechanical Design department, Faculty of Engineering, Minia University, Egypt.

**Demonstrator** (2008 to 2011) at Production Eng. Mechanical Design department, Faculty of Engineering, Minia University, Egypt.

### Languages:

- ✚ Arabic: Mother tongue
- ✚ English: Excellent in listening, Writing, Reading and Speaking
- ✚ Spanish: Fair in listening, Writing, Reading and Speaking
- ✚ Chinese (Simplified): Fair in listening, Writing, Reading and Speaking

### **Personal skills:**

- ✚ Self-motivated
- ✚ Able to work under pressure
- ✚ Self and quick learning
- ✚ Cooperative
- ✚ Able to work in research team

### **Computer Skills:**

- ✚ AutoCAD, AutoCAD mechanical (trainer)
- ✚ MATLAB
- ✚ ANSYS
- ✚ Abaqus
- ✚ SolidEdge
- ✚ Solidworks
- ✚ Office tool

### **Job-related skills**

- ✚ Courses in Research Team Management.
- ✚ Courses in Scientific publishing
- ✚ Courses in Communication skills in different Education methods

**Teaching Many courses for 10 years, such as: -**

<i>Subject</i>	<i>Years</i>	<i>Place</i>
<i>Machine tools applications</i>	2017	Huzhou vocational and technical college, China. South Essex College, England.
<i>Mechatronics systems principles</i>	2017	Huzhou vocational and technical college, China. South Essex College, England.
<i>Computer applications in Mechanical Engineering</i>	2016	Minia University, Egypt
<i>Material science and Manufacturing processes</i>	May 2016 – July 2016	Hubei university of Arts and science, China. University of the sunshine coast, Australia
<i>Fundamentals of Thermodynamics</i>	May 2016 – July 2016	Hubei university of Arts and science, China. University of the sunshine coast, Australia
<i>Mechanical Vibration analysis</i>	2008-2011	Faculty of Engineering, Minia University, Egypt
<i>Traditional and non traditional machining processes</i>	2007-2013	Faculty of Engineering, Minia University, Egypt

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<i>Cutting tool design</i>	2007-2013	Faculty of Engineering, Minia University, Egypt
<i>Metal Forming</i>	2007-2010	Faculty of Engineering, Minia University, Egypt
<i>Physical Metallurgy</i>	2007-2011	Faculty of Engineering, Minia University, Egypt
<i>Mechanical drawing</i>	2007-2013	Faculty of Engineering, Minia University, Egypt
<i>AutoCAD Mechanical</i>	2007-2013	Faculty of Engineering, Minia University, Egypt & El MANARA international Academy, Egypt

### Honors and awards:

- ✚ The scientific publication award for the academic year 2017-2018 from Minia University, Egypt.
- ✚ The scientific publication award for the academic year 2016-2017 from Minia University, Egypt.
- ✚ The outstanding publication award for academic year 2015-2016 from Wuhan University of technology, China.

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- ✚ **The scientific publication award for the academic year 2015-2016 from Minia University, Egypt.**
- ✚ **The outstanding publication award for academic year 2014-2015 from Wuhan University of technology, China.**

### **Major research projects participated**

- ✓ National Natural Science Foundation of China (51275370); the Nature Science Foundation of Hubei Province (2012FFB05104);
- ✓ The Fundamental Research Funds for the Central Universities (2014-yb-004);
- ✓ The Project for Science and Technology Plan of Wuhan City (2013010501010139);
- ✓ The Academic Leader Program of Wuhan City (201150530146); and the Project for Teaching and Research project of Wuhan University of Technology (2012016).

### **Televisions interviews**

Interview in the national channel about the recent progress in Mechanical Engineering, and Engineering Softwares. October, 2012.

<https://www.youtube.com/watch?v=pxGyodHXJwo>.

### **Publications:**

- 1) [A.M.M. Ibrahim](#), Y. Hang, X. Shi, A.R. Radwan, W. Zhai, K. Yang, B. Xue, Tribological Characterization of NiAl Self-Lubricating Composites

- Containing V<sub>2</sub>O<sub>5</sub> Nanowires, Journal of Materials Engineering and Performance, 25 (2016) 4941-4951. **I.F (1.331).**
- 2) [A.M.M. Ibrahim](#), X. Shi, W. Zhai, K. Yang, Improving the tribological properties of NiAl matrix composites via hybrid lubricants of silver and graphene nano platelets, RSC Advances, 5 (2015) 61554-61561. **I.F (3.108)**
  - 3) [A.M.M. Ibrahim](#), X. Shi, A. Zhang, K. Yang, W. Zhai, Tribological Characteristics of NiAl Matrix Composites with 1.5 wt.% Graphene at Elevated Temperatures: An Experimental and Theoretical Study, Tribology Transactions, 58 (2015) 1076-1083. **I.F (1.685).**
  - 4) [A.M.M. Ibrahim](#), X. Shi, W. Zhai, J. Yao, Z. Xu, L. Cheng, Q. Zhu, Y. Xiao, Q. Zhang, Z. Wang, Tribological Behavior of NiAl–1.5 wt% Graphene Composite Under Different Velocities, Tribology Transactions, 57 (2014) 1044-1050. **I.F (1.685).**
  - 5) [A.M.M. Ibrahim](#), M.A.Kamel., Helmy M. Osman, Electrochemical machining of internal conical shapes: An experimental study, LAMBERT academic publishing, 2015.
  - 6) [A.M.M. Ibrahim](#), Fundamentals of AutoCAD Mechanical 2017 (For Beginners), Dar El-Marefa publishing, (2016)
  - 7) W. Zhai, X. Shi, [A.M.M. Ibrahim](#), Z. Xu, K. Yang, Q. Zhang, Effect of hardness ratio on the wear performance and subsurface evolution of Ni<sub>3</sub>Al matrix composites, Tribology Transactions, 60 (2017) 902-912. **I.F (1.685).**
  - 8) Z. Yan, Q. Shen, X. Shi, K. Yang, J. Zou, Y. Huang, A. Zhang, [A.M.M. Ibrahim](#), Z. Wang, Tribological Behavior of  $\gamma$ -TiAl Matrix Composites with



- Different Contents of Multilayer Graphene, Journal of Materials Engineering and Performance, 26 (2017) 2776-2783. **I.F (1.331).**
- 9) Q. Shen, X. Shi, J. Zou, K. Yang, Y. Huang, A. Zhang, [A.M.M. Ibrahim](#), Y. Wang, Tribological Performance and Self-Lubricating Film Formation Mechanism of TiAl-Based Composites at Elevated Temperatures, Journal of Materials Engineering and Performance, 26 (2017) 268-276. **I.F (1.331).**
- 10) F. Essa, Q. Zhang, X. Huang, [A.M.M. Ibrahim](#), M. Kamal Ahmed Ali, S. Sharshir, Enhancing the tribological and mechanical properties of M50 steel using solid lubricants—A detailed review, Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, (2017) 1350650117723224. **I.F (1.320).**
- 11) F. Essa, Q. Zhang, X. Huang, [A.M.M. Ibrahim](#), M.K.A. Ali, M.A. Abdelkareem, A. Elagouz, Improved Friction and Wear of M50 Steel Composites Incorporated with ZnO as a Solid Lubricant with Different Concentrations Under Different Loads, Journal of Materials Engineering and Performance, 26 (2017) 4855-4866. **I.F (1.331).**
- 12) W. Zhai, X. Shi, [A.M.M. Ibrahim](#), Z. Xu, Q. Zhang, Investigation of mechanical and tribological properties of tribo-layer of Ni<sub>3</sub>Al matrix composites, Lubrication Science, 28 (2016) 407-422. **I.F (1.414).**
- 13) K. Yang, X. Shi, J. Zou, A.R. Radwan, [A.M.M. Ibrahim](#), X. Li, Y. Huang, Q. Shen, The Research on the Bionic Friction Layers of TiAl-10wt.% V<sub>2</sub>O<sub>5</sub> Nanowires at the Applied Loads of 6-24 N, Journal of Materials Engineering and Performance, 25 (2016) 5391-5399. **I.F (1.331).**









- 14) Q. Zhu, X. Shi, W. Zhai, K. Yang, [A.M.M. Ibrahim](#), Z. Xu, Y. Xiao, A. Zhang, Research on the Thickness of the Friction Layer of Ni<sub>3</sub>Al Matrix Composites with Graphene Nanoplatelets, *Tribology Letters*, 59 (2015) 40. **I.F (1.891)**.
- 15) Q. Zhu, X. Shi, W. Zhai, K. Yang, [A.M.M. Ibrahim](#), Z. Xu, L. Chen, Y. Xiao, A. Zhang, Q. Zhang, Influence of subsurface micro/nano-structural evolution on macroscopic tribological behavior of Ni<sub>3</sub>Al matrix composites, *Tribology Letters*, 57 (2015) 21. **I.F (1.891)**.
- 16) W. Zhai, X. Shi, J. Yao, Z. Xu, [A.M.M. Ibrahim](#), Q. Zhu, L. Chen, Y. Xiao, Synergetic lubricating effect of WS<sub>2</sub> and Ti<sub>3</sub>SiC<sub>2</sub> on tribological properties of Ni<sub>3</sub>Al matrix composites at elevated temperatures, *Tribology Transactions*, 58 (2015) 454-466. **I.F (1.685)**.
- 17) W. Zhai, X. Shi, J. Yao, [A.M.M. Ibrahim](#), Z. Xu, Q. Zhu, Y. Xiao, L. Chen, Q. Zhang, Investigation of mechanical and tribological behaviors of multilayer graphene reinforced Ni<sub>3</sub>Al matrix composites, *Composites Part B: Engineering*, 70 (2015) 149-155. **I.F (4.727)**.
- 18) W. Zhai, X. Shi, S. Song, J. Yao, [A.M.M. Ibrahim](#), Z. Xu, A.Q. Ud Din, L. Chen, Q. Zhu, Y. Xiao, Tribological Performance of Ni<sub>3</sub>Al Self-Lubricating Composites with Different Content of TiC at Elevated Temperature, *Tribology Transactions*, 58 (2015) 365-373. **I.F (1.685)**.
- 19) J. Yao, X. Shi, W. Zhai, Z. Xu, [A.M.M. Ibrahim](#), Q. Zhu, Y. Xiao, L. Chen, Q. Zhang, Influence of Lubricants on Wear and Self-Lubricating Mechanisms of Ni<sub>3</sub>Al Matrix Self-Lubricating Composites, *Journal of Materials Engineering and Performance*, 24 (2015) 280-295. **I.F (1.331)**.

- 20) J. Yao, X. Shi, W. Zhai, [A.M.M. Ibrahim](#), Z. Xu, S. Song, L. Chen, Q. Zhu, Y. Xiao, Q. Zhang, Effect of TiB<sub>2</sub> on Tribological Properties of TiAl Self-lubricating Composites Containing Ag at Elevated Temperature, *Journal of Materials Engineering and Performance*, 24 (2015) 307-318. **I.F (1.331)**.
- 21) K. Yang, X. Shi, D. Zheng, W. Zhai, [A.M.M. Ibrahim](#), Z. Wang, Tribological behavior of a TiAl matrix composite containing 10 wt.% Ag investigated at four wear stages, *RSC Advances*, 5 (2015) 77885-77896. **I.F (3.108)**.
- 22) K. Yang, X. Shi, W. Zhai, [A.M.M. Ibrahim](#), Wear rate of a TiAl matrix composite containing 10 wt.% Ag predicted using the Newton interpolation method, *RSC Advances*, 5 (2015) 67102-67114. **I.F (3.108)**.
- 23) Z. Xu, J. Yao, X. Shi, W. Zhai, [A.M.M. Ibrahim](#), Y. Xiao, L. Chen, Q. Zhu, A. Zhang, A Study of the Frictional Layer of TiAl-12Ag-5TiB<sub>2</sub> Composite During Dry Sliding Wear, *Journal of Materials Engineering and Performance*, 24 (2015) 2875-2884. **I.F (1.331)**.
- 24) Z. Xu, L. Chen, X. Shi, Q. Zhang, [A.M.M. Ibrahim](#), W. Zhai, J. Yao, Q. Zhu, Y. Xiao, Formation of friction layers in graphene-reinforced TiAl Matrix self-lubricating composites, *Tribology Transactions*, 58 (2015) 668-678. **I.F (1.685)**.
- 25) Q. Zhu, X. Shi, W. Zhai, J. Yao, [A.M.M. Ibrahim](#), Z. Xu, S. Song, A.Q. ud Din, L. Chen, Y. Xiao, Effect of counterface balls on the friction layer of Ni<sub>3</sub>Al matrix composites with 1.5 wt.% graphene nanoplatelets, *Tribology Letters*, 55 (2014) 343-352. **I.F (1.891)**.

- 26) J. Yao, X. Shi, W. Zhai, [A.M.M. Ibrahim](#), Z. Xu, L. Chen, Q. Zhu, Y. Xiao, Q. Zhang, Z. Wang, The enhanced tribological properties of NiAl intermetallics: combined lubrication of multilayer graphene and WS<sub>2</sub>, Tribology Letters, 56 (2014) 573-582. **I.F (1.891).**
- 27) M. A. Kamel. H.M. Osman, M. M. Kesba., [A.M.M. Ibrahim](#), Investigation of some electrochemical machining parameters for internal conical shapes, MJET, (2011).
- 28) [A.M.M. Ibrahim](#), X. Shi, W. Zhai, K. Yang. Synergistic effect of multi layers graphene and V<sub>2</sub>O<sub>5</sub> nano wires on the tribological behavior of NiAl composites, under review in tribology international.
- 29) [A.M.M. Ibrahim](#), X. Shi, W. Zhai, K. Yang. Tribological challenges in wind energy generation: a detailed review, under review in Energy journal.
- 30) [A.M.M. Ibrahim](#), A. fouli, F. Essa. The evolution of the tribo-layer film of Epoxy composites reinforced by carbon nano-fibers. Under review in Wear.

### Articles Reviewer

**I have reviewed many articles for many international journals such as:**

-  Nanoscale
-  Wear
-  Materials and Design
-  RSC advances
-  Tribology transactions
-  Tribology Letters
-  Journal of material and performance
-  Industrial tribology