**Ahmed Mohamed Nabil Mohib, Ph.D.**

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###### Education

**2009** Ph.D. Degree in Industrial and Manufacturing Systems Engineering, University of Windsor, Canada.

**2003** M.Sc. Degree in Mechanical Engineering, Mechanical Design & Production Department, Faculty of Engineering, Cairo University, Egypt.

**1998** B.Sc.Degree in Mechanical Engineering, Mechanical Design & Production Department, Faculty of Engineering, Cairo University, Egypt.

###### Qualifications

* Expert in modeling applications and manufacturing systems’ performance analysis.
* Expert in inspection planning systems and applications; tolerance analysis and implementation; reverse engineering and surface fitting; maintenance planning systems and applications.
* Expert knowledge in the field of manufacturing systems (DMS, FMS, RMS, Plant layout, Work / time study, Lean and Agile).
* Excellent skills in teaching and education process.

**Research Background**

My research interests span several areas of industrial and manufacturing systems engineering research. My main interest is concerned with modeling, planning and optimal design for different types of manufacturing systems and supply chain applications such as production, inspection, maintenance as well as flow lines that provide high production rate, work study, material handling, plant layout and warehouse design, clustered value chains. I am also interested in investigating the use of optimization in various engineering applications using advanced optimization/AI techniques. In my previous research, I managed to manipulate various research techniques and tools in the domains of mathematical modeling, cost analysis, performance evaluation, surface modeling, continuous/discrete optimization, Artificial Intelligence (AI), decision support systems as well as programming. The conducted research has a great potential of extensions in the fields of system design, process planning, production planning, decision support systems for unexpected manufacturing situations, industrial management, optimization/AI applications in engineering, surface fitting and reverse engineering.

**Professional Experience**

**Assistant Professor Sept. 2022 - Current**

*Mechanical Engineering Department, School of Science and Engineering, American University in Cairo, Egypt.*

* Teaching courses
	+ Operations Research
	+ Work Systems Analysis and Design
	+ Facility Planning and Design.
	+ Production and Inventory Control

**Assistant Professor Sept. 2019 – August 2022**

*Industrial Engineering Program, Faculty of Engineering, Nile University, Egypt.*

* Teaching courses
	+ Operations Research
	+ Facility Planning and Design.
	+ Work Systems Analysis and Design
	+ Engineering Economy
	+ Project Management
	+ Service Management

**Assistant Professor Sept. 2016 – August 2018**

*Industrial Technology and Packaging,* *OCOB, CAL POLY , USA*

* Research in Modeling Risks in Supply Chain
* Teaching undergraduate courses.
	+ Supply Chain Management in Manufacturing and Services (ITP 371).
	+ Production Planning and Control (ITP 410)
	+ Quality and Lean Systems Management (ITP 403)
	+ Engineering Economics (IME 314)

**Assistant Professor Sept. 2009 – Sept. 2018**

*Industrial Engineering Department, Faculty of Engineering, Fayoum University, Egypt.*

* Teaching courses at both graduate and undergraduate levels.
	+ Engineering Economy – Industrial / Electrical Engineering Dept.
	+ Operations Research I & II – Industrial Engineering Department.
	+ Work Study and Plant Layout – Industrial / Mechanical Engineering Department.
	+ Product Design – Industrial / Mechanical Engineering Department.
	+ Work Study and Plant Layout – Graduate course in Industrial Engineering Department as part of the Industrial engineering PhD. & M.Sc. programs.
	+ Manufacturing technology – Graduate course in Industrial Engineering Department as part of Industrial engineering diploma program.
	+ CAD/CAM – Industrial / Mechanical Engineering Department.
	+ Manufacturing Information Systems – Industrial Engineering Department.

**Adjunct Assistant Professor Sept. 2018 – May 2022 and (September 2010 – May 2016)**

*School of Sciences and Engineering, American University in Cairo, Egypt.* ***AUC***

* Teaching courses at the graduate level.
	+ Integrated Manufacturing Systems (MENG 5241) (Fall 2011, 2015).
	+ Engineering Statistics (ENGR 518) (Fall 2010).
* Teaching courses at the undergraduate level.
	+ Manufacturing Systems Automation (MENG 4477) Spring 2011 - 2014.
	+ Design of Engineering Systems (MENG 4565) Spring 2014-2016.
	+ Mechanical Design II (MENG 4507) Fall 2012-2016.
	+ Work Analysis and Design (MENG 344) Fall 2013.
	+ Engineering Economy (ENGR 3222) Spring 2013 – 2016.

**Adjunct Assistant Professor January 2011 – Aug 2016**

*Industrial and Service Engineering and Management Department, Nile University, Egypt.* ***NU***

* Teaching courses at the graduate level.
	+ Problem Solving and Decision Making (MOT 601) (Fall 2011).
* Teaching courses at the undergraduate level.
	+ Engineering Economy.
	+ Introduction to ISEM.
	+ Operations Research.
	+ Facility Design and Management.
	+ Advanced Statistics and Quality Engineering.
	+ Product Realization.
	+ Advanced Manufacturing Systems.

**Adjunct Assistant Professor (September 2009 – Aug 2016)**

*Mechanical Design & Production Department, Faculty of Engineering, Cairo University, Egypt.*

* Teaching courses at the graduate level at the Department of Mechanical *Design & Production*.
	+ Statistical analysis and Design of Experiment – Graduate course in Industrial Engineering as part of the Mechanical Design & Production Engineering PhD. & M.Sc. programs.
	+ Statistical analysis and Data presentation – Graduate course in Industrial Engineering as part of the Mechanical Design & Production Engineering Diploma programs.
* Teaching courses at the undergraduate level at the Department of Mechanical *Design & Production*.
	+ Engineering Economy & Accounting – 3rd year Mechanical Design & Production Engineering.

**Adjunct Assistant Professor (September 2010)**

*Faculty of Engineering, British University in Egypt, Egypt.*

* Teaching courses at the undergraduate level at the Department of Mechanical Engineering.
	+ Plant layout and Inventory Control (PRDT03I03) (Fall 2010).

**Sessional Instructor (September 2007 - December 2008)**

*Industrial & Manufacturing Systems Engineering (IMSE) Department* – *University of Windsor, Canada.*

* Instructor of the Engineering Economy course # 85-313

**Post Doctoral Fellow (2009)**

*Intelligent Manufacturing Systems (IMS) Center – University of Windsor, Canada.*

* Conduct basic and applied research in modeling, analysis and optimization of localization process, segmentation process, and inspection planning.
* Document research results in archival papers, and refereed conferences.
* Develop software to implement research concepts and results.
* Reviewing of research papers for the 16th CIRP International Conference on Life Cycle Engineering, May 2009.
* Provide assistance and guidance to students and researchers in the IMS group.

**Research and Teaching Assistant (September 2003 – July 2008)**

*Industrial & Manufacturing Systems Engineering (IMSE) Department* – *University of Windsor, Canada.*

*Mechanical & Material Engineering (MAME) Department* – *University of Windsor, Canada.*

* Performed and presented research on the development of hybrid inspection planning and reverse engineering systems for complex mechanical parts with prismatic and sculptured features: Development and solution of novel planning, registration, segmentation and localization algorithms.
* Assisted in teaching the following courses (work also included supervising/marking assignments, projects & exams as well as lecturing to students):
	+ Engineering Economy (06-85-313) – 3rd year General Engineering course
	+ Fundamentals of FMS (06-91-431) – 4th year IMSE course
	+ Manufacturing Driven Product Design (06-91-315) – 3rd year IMSE course
	+ Analysis of Mechanical Systems (06-92-222) – 2nd year MAME course (two times)
	+ Stress Analysis (06-92-311) – 3rd year MAME course
	+ Engineering Mechanics (06-85-111) – 1st year General Engineering course (two times)

**Assistant Lecturer (September 1998 – August 2003)**

*Manufacturing & Industrial Engineering Department, Faculty of Engineering, Cairo University, Fayoum Campus, Egypt.*

* Worked as a full time assistant lecturer in the Industrial Group and taught the following courses more than once (work also included supervising/marking assignments, projects & exams as well as lecturing to students):
	+ Production & Operations Management
	+ Operations Research
	+ Work Study and Plant layout
	+ Industrial Management
	+ Manufacturing Engineering
	+ Computer Numerical Methods
	+ Engineering Drawing
	+ Mechanics
	+ Statistics
	+ Workshop Technology

**Industrial Engineer (July 1999 – August 2001)**

*ORASCOM Construction Company, Cairo, Egypt.*

* Cost estimation of the electro-mechanical systems installed for the bid construction projects. Examples are engineering plants and factories, hotels and resorts, etc.

**Software Developer (September 1998 – July 1999)**

*RITEC (Research, Industrial, Training and Engineering Services Company), Cairo, Egypt.*

* Research and Development,
	+ Development of algorithm for rotor dynamic analysis and balancing.
	+ Development of Rotor Dynamic Software RIMAP [http://www.rimap.net/].

**Contributions to Research and Development**

**Articles Published/Accepted in Refereed Journals:**

* A. M. Deif, A. M. N. Mohib, "Temporary Clusters: A New SME Clustering Management Model", Journal of Modelling in Management, Vol 16 n. 2 pp. 486-505, 2021.
* Mohib, A., Deif, A., “Supply Chain Multi-state Risk Assessment using Universal Generating Function”, Production Planning & Control, Vol 31, Issue 9, 2020.
* Mahmoud, A. A., Aly, M. F., Mohib, A. M., Afefy, I. H., " A Two-stage Stochastic Programming Approach for Production Planning System with Seasonal Demand", Management and Production Engineering Review, Vol.11 n. 1 pp. 31–42, 2020.
* kamel, G, Mohib, A., Helaly, I., Aly, M. "Optimization of A Multilevel Integrated Preventive Maintenance Scheduling Mathematical Model using Genetic Algorithm", International Journal of Management Science and Engineering Management, 2020.
* Mahmoud, A. A., Aly, M. F., Mohib, A. M., Afefy, I. H. "New Optimization Model for Multi-Period Multi-Product Production Planning System with Uncertainty", Industrial Engineering & Management Systems, vol. 18, No 4, pp.872-883, 2019.
* Deif, A., and Mohib, A., “A Typology to Understand some Dynamics of Supply Chain Innovation Location”. Journal of Supply Chain and Operations Management, Vol. 17, n.1, pp. 47-55. 2019.
* Afefy, I. H., Mohib, A., El-kamash, A. M., Mahmoud, M. A., "A New Framework of Reliability Centered Maintenance", Jordan Journal of Mechanical and Industrial Engineering, vol. 13, No 3, Pages 175 - 190, 2019.
* Mahmoud, I. A., Aly, M. F., Mohib,A., Afefy, I. H., "Integration of Benchmarking with Overall Equipment Cost Loss for Industrial Process Improvement", Jordan Journal of Mechanical and Industrial Engineering, Vol. 13, N. 1, May. 2019.
* Mansour, H, Mohib, A, Fahmy Aly, M, Attia, H. “A bi-objective model for worker assignment in cellular manufacturing system design”, International Journal of Engineering and Management Research,Vol.7, n4, 2017.
* Badr,M., El Kordy,M., Mohib, A., Ibrahim M.,"Cost Analysis of Hybrid Wind Energy Generating System Considering CO2 Emissions", International Journal of Energy and Power Engineering, Vol.10, n.5, 2016.
* Abohashima H.S., Aly M.F., Mohib A. and Attia H.A., “Minimization of Defects Percentage in Injection Molding Process using Design of Experiment and Taguchi Approach”, Industrial Engineering & Management, Vol.4, n5, 2015.
* Badr, M. A.; Mohib, A. N.; Ibrahim, M. M., “Small Wind Turbine Hybrid System for Remote Application: Egyptian Case Study”, International Journal of Mechanical, Aerospace, Industrial and Mechatronics Engineering, Vol.8, n9, 2014.
* Mohib, A. and ElMaraghy, H.A., "Tolerance-based Localization Algorithm: Form Tolerance Verification Application", International Journal of Advanced Computer Integrated Manufacturing, Vol.47, n5, 2010.
* Mohib, A., Azab, A. and ElMaraghy, H., "Feature-based hybrid inspection planning: A mathematical programming approach", International Journal of Computer Integrated Manufacturing, vol. 22, n1, 2009, pp. 13-29.
* Youssef, A.M.A., Mohib, A. and ElMaraghy, H.A., "Availability Assessment Of Multi-State Manufacturing Systems Using Universal Generating Function", Annals of the CIRP, Vol. 55, n1, 2006, pp. 445-448.
* Shalaby, M.A., Gomaa, A.M., Mohib, A.M., "A genetic algorithm for preventive maintenance scheduling in a multi-unit multi-state system", Journal of Engineering and Applied Science, Vol. 51, n4, 2004, pp. 795-811.

**Other Refereed Contributions:**

* Deif, A., and Mohib, A., (2019). Understanding Supply Chain Innovation Location Impact. Proceedings of the 31st Annual Meeting of CSU-POM, CA, USA
* Mohib, A and Deif, A. 2017, “Exploring temporary clusters as a management strategy” Proceedings of the 2017 International Symposium on Business and Social Sciences Seoul, Korea.
* Mohib, A.; ElMaraghy, H.A., 2009, "CAD-based Closed-form Solution Algorithm to verify cylindricity", CAT 2009, 11th CIRP International Conference on Computer Aided Tolerancing “Geometric Variations within Product Life-Cycle Management” March 2009, Annecy, France.
* Mohib, A.; ElMaraghy, H.A., 2007, Framework for Feature-based Hybrid Inspection Planning for Complex Mechanical Parts, CARV International Conference on Changeable, Agile, Reconfigurable and Virtual Production, Toronto, Ontario, Canada.
* Mohib, A.; Remy, S; ElMaraghy, H.A., 2006, Recognition of geometric primitives using medial axis transform, The 16th CIRP International Design Seminar, Design and Innovation for a sustainable Society, Kananaskis, Alberta, Canada.

**Engineer in Training**

**Planning Engineer (June – August 1997)**

*GESCO Group, Cairo, Egypt.*

* Worked in one of the maintenance lines in Amreya Plant in Alexandira and handled the maintenance of different types of jars and shock-subs for drilling and extracting petrol.
* Developed a maintenance plan for parts replacement and warehouse storage system to improve the quality and efficiency of the digging tools.

**Production Engineer (July – August 1994)**

*Faculty of Engineering Workshop, Cairo University, Egypt.*

* Trained on working with different types of machines in the workshop.

**University of Windsor (2003 - 2009)**

* **Metris** Bridge Coordinate Measuring Machines equipped with Laser Sensors: October 2004. Also training on **Focus** (the inspection software) and **Paraform** (the reverse engineering software) was provided.
* **Opal-RT** Real-time Hardware-in-the-Loop Open Architecture System: June 2004

###### Computer Skills

* Programming in MATLAB, Borland C++ (completed a course of study in IBM World Trade Corporation, Egypt Branch, Cairo, Egypt) and Fortran.
* Perfect knowledge of Microsoft Word, PowerPoint & Excel.
* Perfect knowledge of working under Microsoft Windows.
* Good knowledge of state of the art parametric feature-based solid and surface modeling such as Solid Works, CATIA, IDEAS and Solid Edge software

**Scholarships & Awards**

**2005 – 2008** Graduate Tuition Scholarship, University of Windsor, Canada.

**2004 – 2005** Visa Differential Bursary, University of Windsor, Canada.

**1998** Award of high-ranking newly graduated engineers from the Syndicate of Engineers, Egypt.

**1993 – 1998** Egyptian Government Scholarship for Distinguished Undergraduate Students - Academic - Cairo University, Egypt.

**languages**

Arabic: Mother tongue.

English: Excellent command of both spoken and written English.

French: Excellent command of both spoken and written French.

**Other Credentials**

**1998 – Present** Member in the Syndicate of Engineers, Egypt.

**2005 – Present**  Assisted in reviewing research manuscripts for international journals (IJCIM, IJAMT).

**Jan-Feb 2009** Technical reviewer of research papers for the 16th CIRP International Conference on Life Cycle Engineering, May 2009.

**Jan-Apr 2007** Technical reviewer of research papers for the CIRP International Conference on Changeable, Agile, Reconfigurable and Virtual Production (CARV), Toronto, Canada.

**July 2007** Member of the organizing team for the CIRP International Conference on Changeable, Agile, Reconfigurable and Virtual Production (CARV), Toronto, Canada.

**February 2000** Member of the organizing team for the Cairo University’s 7th International Mechanical Design and Production conference held at Mena-House Oberoi Hotel.

**References**

**Dr. Eric Olsen**, Ph.D.

Professor, Area Chair

Cal Poly - Industrial Technology & Packaging

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