

Curriculum Vitae**M. Atia****Personal Information**

Full Name Mostafa Rostom Ahmed Atia
Date of birth March 26, 1970 Alexandria, Egypt
Nationality Egyptian
Academic Deg. **Associate Professor**
Job Title Head of Mechanical Department (Mechatronics), Faculty of Engineering, Arab Academy for Science and Technology and Maritime.
Proficient Consultant of mechanical design, 3/1383.
Marital Status Married
Military Service Exempted
H. Address 5, El Hossein Bn Ali St., Heliopolise, Cairo, Egypt
W. Address El Moshear Ahmed Ismail, Sheraton, Cairo, Egypt
Home Tel. (+202) 29287076
Office Tel&Fax (+202) 26842472
Mobile Tel. (+20122) 1008346
E-Mail mrostom1@yahoo.com – mrostom1@aast.edu

Contents**Education****Courses****Academic Experience****Career Related Experience****Training****Special Skills****Awards & Scholarships****Research Projects****Selected Technical Publications****References****Education**

1997- 2002 **Ain Shams University in Egypt & University of Glamorgan in UK:**
Doctoral of Philosophy: Mechanical Engineering.
 Thesis Topics: "Applications of Artificial Intelligence to Grinding Operations via Neural Networks ".

1993- 1996 **Ain Shams University:**
Master of Engineering Science: Mechanical Engineering.
 Thesis Topics: "Investigation into the machinability of some local woods and date palm leaves' midribs".
 Area of specialization: Production Engineering, Theory of metal cutting.

1987-1992 **Ain Shams University:**
Bachelor of Science: Mechanical Engineering (Honors)
 Area of specialization: Production Engineering, Final Project "Design and Manufacturing a Date Palm Leaves Midribs (DPLM) Skinning machine".

1984-1987 **El Tabary Roxy**
 Secondary school

1981-1984 **El Tabary Roxy**
 Preparatory school

1976-1981 **Misr El Gedida**

Primary school

Courses

2014

AASTMT

- Exam preparation methods
- Ethics in research
- Advanced presentation techniques

2004

Ain Shams University:

- Using new technologies in teaching.
- Technical writing of scientific project proposal

2004

Egyptian-German Culture centre:

- Course in German Language, 1st level.

2004

Al Fateh Group:

- Course in Wild Fire Pro Engineer.

2000

Institute of Grinding Technology, University of Bristol, UK:

- Vibration in grinding training program.

1994

Rational Civil Animation Training Organization:

- Course in Basic Hydraulics and Hydraulic circuit design.
- Course in Electric for hydraulics.

1991

Arab International Optics Company:

- Trainee on CNC lathes and milling machines.

1991

Ain Shams University computer laboratories:

- Course in AUTOCAD.

1989

El Nasr Automotive Company:

- Training on various manufacturing processes.

1989

AUC:

- Course in English language (level 14).

Academic Experience

2008-present

Arab Academy for Science and technology and maritime

- **Head of Mechanical Department (Mechatronics).**
- **Under Graduate Courses**
 - Mechanical drawing.
 - Machine design I.
 - Machine Design II
 - Computer aided design
 - Manufacturing processes
- **Post Graduate Courses**
 - Research methods for mechanical engineering.
 - Computer aided design and manufacturing CAD/CAM.
- **Graduation Projects**

All projects include design and implementation

 - Protruded image machine, 2014;
 - Rapid prototyping machine, 2014;
 - CD shaping CNC machine, 2014;
 - Hose cutting CNC machine, 2013;
 - Rapid prototyping machine, 2012;
 - PCB CNC drilling machine, 2010, 2015;
 - Intelligent concrete pump boom system, 2010;
 - Wire bending CNC machine, 2009;
 - CNC node indexer, 2009.
- **MSc and PhD**

- Development of Automated Control System for Shifting of Manual Gear Box, 2015.
- Modified Genetic Algorithm Optimization for composite Blade structure Design MSc, 2015.
- Categorization of Grey Cast Iron Based on Image Processing Using Artificial Neural Networks, MSc, 2014.
- Control of Electro-mechanical Brake-by-Wire System Using Sliding Mode Control, MSc, 2014.

1992-2010
2002-2010

Production and Mechanical Design Department (Ain Shams University):
Assistant professor

▪ **Under Graduate Courses**

- Metrological instruments, 3rd year production.
- Metrological methods, 4th year production.
- Production technology, Special new programs
- Manufacturing engineering, primary year (Marin Arabian Academy)

▪ **Post Graduate Courses**

- Calibration, PhD.
- Theory of metrology, MSc, PhD.
- Sensors, MSc, PhD.
- Advanced metrology, Diploma, MSc, PhD.
- Advanced manufacturing engineering, Diploma.
- Artificial neural networks, PhD.

▪ **Graduation Projects**

All projects include design and implementation

- CD shaping machine, 2007, 2008;
- Rosary machine, 2008;
- CNC complex tube bending machine, 2008;
- Ball shape automatic turning tool, 2007;
- Articulation arm measuring machine, 2006;
- Rabid prototyping machine using hot wax gun, 2005, 2007, 2008;
- A pneumatic sensor for assessment of sponge density, 2006;
- A pneumatic gap sensor, 2004.

▪ **MSc and PhD**

- Applications of computer vision in metrology, MSc, 2006.
- Driving system fault diagnoses via vibration measurements, MSc, 2009.
- Performance comparison of error mapping techniques for coordinate measuring machines, CMMs, PhD, 2009.
- Controlling of Abrasive Water Jet Plain Milling using neural network, PhD, 2014.
- Optimization of skeleton structure design under dynamic loading, PhD, 2014
- Suppression of Boring Bar Vibrations, MSc, 2015.

1996-2002

Teaching Assistant

- **Courses:** Metrology, production engineering, Theory of metal cutting, machine tool design, metal forming equipment design, Jigs and fixtures design, CNC machines, work study and plant layout.
- Adapt a conventional surface-grinding machine to a CNC machine grinding-machine as part of the thesis for PhD.

1992-1996

Administrator

- Studying the Machinability Properties of some woods species as part of the thesis for MSc;
- A member of engineering staff for special project titled "Investigation of local woods machinability", conducted by the Faculty of Engineering, Ain Shams University.
- Design and Construct a complete set for cutting force and temperature on line measurement and a computerized data acquisition system.

Career Related Experience

2004-Present

Arab Contractors:

- Design and construct a draw up bascule bridge as part of **Azmy bridge** in PortSaeed (20m length, 15m width, 150 ton weight), 2012-2015;
- Repairing of damaged box boom of 80 ton crane, 2015.
- Repairing of damaged lattice boom of 80 ton crane, 2015.
- Repairing of 3m screw pump shaft, 2014;
- Rehabilitation of Aswan sewage water station pumps (4 off), 2014;
- Rehabilitation of Gerza water station pumps (6 off), 2013;
- Repairing of lattice boom of 60 ton crane, 2013;
- Repairing of telescopic boom of 80 ton crane, 2014;
- Design and implementation the methodology and equipments of 120 ton **Ramsis II** statue transportation, 2004-2006;
- Design and manufacture of side cars of settlement-tank bridge (10 off), 2009;
- Design the repairing procedure of settlement tank bridge (8 off), 2009;
- Design the repairing procedure of a concrete pump (6 off), 2006-2008;
- Design and manufacture concrete barriers and moulds (Mehwar Road), 2007;
- Design a movable platform for maintenance of the **Cairo tower** body, 2006;
- Design the repairing procedure of 120 t crane chassis, 2005;
- Design and manufacture of manual press of rice straw, 2006;
- Design of a rice straw hydraulic press, 2007.

2003-2012

Al Fateh Group:

CEO member

- Supervisor of the technical office:-
 - Flange welding line.
 - Corrugated sheet shear press (4mm Th. – 1 m width).
 - Four roll bending machine.
 - Over head traveling and gantry cranes (3, 5, 10, and 20 tons – 24 m span).
- Design and manufacture a double belt conveyor press (18m), 2007-2008.
- Design and manufacture a Built-up section production line, 2004.
- Design and manufacture a space truss node indexer, 2003.

2013-2016

Mantrac:

- Design and manufacturing of Generator Set shelter (21 m), 2016;
- Design and manufacturing of Generator Set shelter (2 off) (50 ton), 2015;
- Design and manufacturing of Generator Set shelter (2 off) (60, 65 ton), 2014;
- Design and manufacturing of Generator Set shelter (100 ton), 2013.

2016

EHAF:

- Revision for the locomotive movable bridges in Egypt (10 off), 2016;

2014

Unilever:

- Design and manufacturing of Platform of Hard Cube, 2014;
- Design and manufacturing of Platform & pillars Crane, 2014.

2012

Schneider:

- Design and manufacturing of Switch Gear shelter (35 ton).

2009-2010

Novel (Research & Development):

- Design a hard gelatin capsule half rectification, sorting and feeding machine.

- 2009-2010 NPC:**
- Design and manufacture a static pressure testing machine for pipe of 2.5 m internal diameter, 6m length and 35 to weight at 24bar.
- 2009-2010 Royal Cement:**
- Design and manufacture a backward fan rotor, 300000 m³/h, 2 m diameter.
- 2005- 2007 SMA Engineering Services:**
- **Technical director**
 - Design & manufacturing of tube welding machine, EGYSCO, 2006
 - Design of built-up section automatic welding machine, EGYSCO, 2007
 - Design a reciprocating sign, one ton & 4m diameter, BADR, 2006
- 2008 Abu Yousef Co.:**
- Design and manufacture stillage, 1.3 ton, 7000 off.
- 2006-2009 Eastern Company:**
- Design and manufacturing of an auto-feeder machine.
 - Design and manufacturing of a weighing and conveyor machine.
 - Design and manufacturing of a universal testing mixer.
 - Design a solar collector heater, (800 square meter)
- 2006-2007 Roads & Bridges Department:**
- A consultant of **Sherbeen Bridge** rehabilitation.
 - A consultant of **Naga Hamady Bridge** fenders.
- 2006 El-Salam Constructions:**
- Design and manufacture a 1m tunnel boring machine, 2007.
 - Design and manufacture a 0.8m tunnel boring machine, 2006.
- 1996- 2003 Roshdy Metal Industries:**
- **Director** of mechanical and hydraulic design office:-
 - Aluminum continuous casting and hot forming machinery;
 - Full and semi displacement pilling machine.
 - Vibrating hummers and pile clamps up to 100 t.
 - Tunnel boring machines from 0.6 to 3.2 m diameter;
 - Machine tool accessories, jigs and fixtures.
- 1992-2006 SIDC (Small Industries Development Center):**
- General director (2004-2006)
 - A director for project titled “A training center of wood turning (Arabesque) in Kena, El Magzan”, 2005;
 - Design a 640 HP chip gearbox, 2005;
 - Design and manufacture an electric rolling door, 2004;
 - A director for project titled “A training center of wood turning (Arabesque) in Kena, El Dear Elgarby”, 2004;
 - Design and manufacture a 10 ton electric cable rail, 2004;
 - A member of engineering staff for the design and manufacture of machinery of a factory for production of block boards from DPLM. The Project has been opened in El Kharga city, with collaboration of the (GTZ), Germany, 1992.
 - Design and manufacture several DPLM stripping and skinning machines;
 - Design and manufacture a slicing machine for block board manufacturing;
 - Design an automatic strip assembly machine for block board manufacturing;
 - Design and manufacture a wood painting room, assembled in Dakhla city.
- 2004-2006 ZMC:**
- Design and manufacture a special production line for bending operations of the compressor internal discharge tube, 2006;
- 1998-2004 KEFAC (Kenawy Industries Factory):**
- Design and manufacture a universal testing machine, 2004;

- 2004 Design and manufacture an Aluminum section roll-forming machine, 1998.
- 2004 Al Sweedy Group:**
 - A consultant for manufacturing operation of concrete must stamp.
- 2000-2002 University of Glamorgan, wales, UK:**
 - Researcher in the school of design and advanced technologies.
- 1997-2001 Egyptian company for industries support:**
 - A consultant for small-scale industry development.
- 1997-1999 Military factories (999):**
 - A member of engineering staff for developing a CNC lathe.
- 1997 Misr Panel:**
 - Maintain and upgrade the sheet metal roll forming line.
- 1996-1997 Egypt Panels:**
 - Design and construct a 35 tons PVC panel mold 2*1.7 m working area.
 - Design a 200 tons PVC hydraulic press, 8.5*2 m working area.
- 2012 Schneider:**
 - Design and manufacturing of Switch Gear shelter (35 ton).
- Training**
- 2013 Schneider:**
 - Shelters for equipment: Design and Manufacturing.
- 2010 Society of Mechanical Engineering:**
 - Training for a technical course "Design of spare parts", 2010.
- 2006 - 2009 FIRST:**
 - Training of *Material handling* course, TRUST Co., 2009
 - Training of *Material handling* course, CMPI Co., 2008
 - Training of *Material handling* course, Modern isolation materials Co., 2008
 - A consultant of the need assessment of International wood factory, 2006.
 - A consultant of the need assessment of ITA Egypt factory, 2006.
- 2004-2006 ZMC:**
 - Training for a technical course "Metal cutting, theory and applications", 2004.
- 2006 Pitman, Kuwait:**
 - Training of *Reverse Engineering* course, Kuwait, 2006.
- 2006 CDC:**
 - Training of *Engineering Drawing* course, 2006.
- 1999-2000 Institute of national Planning:**
 - Training of *AUTOCAD software* course.
- 1997-1999 Military factories (999):**
 - Training of *AUTOCAD software* course for design office staff.
- Special Skills**
- Computer Skills:**
 - Proficient in the programming Language of Quick Basic, VC++6;
 - Proficient in use of OFFICE, AUTOCAD, SolidEdge, Inventor, Matlab, LabView;
- Languages:**
 - English [excellent]
 - Arabic [fluent].
 - TOEFL test score in 10-1999 was 273 (583).
- Hand working Skills:**
 - Work on the most of the universal machine tools;
- Professional Organizations:**
 - A member at the Egyptian Engineering Syndicate.

Awards & Scholarships

- 1992-2002** Research and Teaching Fellowship, Production and Mechanical Design Department, Ain Shams University.
- 2000-2002** Research Fellowship, School of Design and Advanced Technologies, University of Glamorgan, UK.
- 1992** Honors status, four years one of the top students and the top in final year, Ain Shams University.

Research Projects

- ❑ Researcher in the research project titled "Design, fabrication and intelligent control of a smart lower limb prosthesis for above knee amputees", conducted by the Faculty of Engineering, Ain Shams University, 2013-2015.
- ❑ Researcher in the research project titled "Innovative Techniques for Design and Manufacturing of Wind Turbine Blades", conducted by the Faculty of Engineering, Ain Shams University, (STDF), 2011-2014.
- ❑ Researcher in the research project titled "Applications of fiber optics", conducted by the Faculty of Engineering, Ain Shams University, CSID, 2008-2010.
- ❑ Researcher in the research project titled "Date Palm Midribs utilization", in collaboration with the Int. Devel. Research Center (IDRC), Canada, 1993.
- ❑ Researcher in the research project titled "Use of Date Palm Leaves Midribs as an industrial raw material", sponsored by the Academy of the scientific research and technology, 1991

Selected Technical Publications

- ❑ Mostafa R. A. **Atia**; Salem A. Haggag; Ahmed M. M. Kamal, "Enhanced Electromechanical Brake-by-Wire System Using Sliding Mode Controller", **2016**, Journal of Dynamic Systems, Measurement, and Control, vol. 138, no. 4, pp. 041003-041003-6, doi: 10.1115/1.4032484.
- ❑ Khaled M. Helal, a, Mostafa R. A. **Atia** and Mohamed I. Abu El-Sebah, " Gain Scheduling Control with Multi-loop PID for 2-DOF Arm Robot Trajectory Control", Dec. **2015**, International Conference on Innovative Engineering Technologies, ID:IRES-ICIETDUB-29125-1618, **Dubai, UAE**.
- ❑ Mahmoud A. Elessawy, a, Mostafa R. A. **Atia** and Mohamed I. Abu El-Sebah, " Automation of Focusing System based on Image Processing through Intelligent Algorithm", Dec. **2015**, International Conference on Innovative Engineering Technologies, ID:IRES-ICIETDUB-29125-1619, **Dubai, UAE**.
- ❑ Ahmed Ali Geneid, Ahmed Badawy, and Mostafa R. A. Atia, "Blade Optimization Approach for a Vertical Wind Turbine", **May 2015**, 16th International conference on Aerospace Science and Aviation Technology, Cairo, **Egypt**.
- ❑ Ahmed A. Barakat, Mostafa R.A. Atia and M. Abdel Salam, "Design and Modeling of an Improved Stiffness Boring Bar", **2015**, 2nd Industry Academia Collaboration Conference, Cairo, Egypt.
- ❑ Mahmoud M. M. El-Ashwah, W. Abbas, Tantawy M. Farid, and Mostafa R. A. Atia, "Modeling and Simulation of Gear-Shift Controller for Automated Manual Gearbox Based on Neuro Fuzzy Control Logic", **2014**, Middle East J. Applied Science, vol. 4, no. 4.
- ❑ S.J. Ebeid, M.R.A. Atia and M.M. Sayed., "Effect of process parameters on abrasive water jet plain milling", December **2014**, El-Azhar Engineering Thirteen International Conference, Cairo, Egypt.
- ❑ S. J. Ebeid, M. R. A. Atia, M. M. Sayed, "Prediction of Abrasive Water Jet Plain Milling Process Parameters Using Artificial Neural Networks", September **2014**, Journal of Machinery Manufacturing and Automation, Volume 3, Vol. 3, Iss. 3, pp. 56-73.
- ❑ Mostafa Rostom A. **Atia**, "Classification and Elimination of Overlapped Entities in DXF Files", April **2014**, ASEJ-D-13-00120, Volume 5, pp. 851-860, Cairo, Egypt.

- Amany Khaled, Mostafa Rostom A. Atia, Tarek Moussa, "Grey Cast Iron Categorization using Artificial Neural Network", April 2014, IJSER Volume 5, Issue4, (ISSN 2229-5518).
- A. Kamal, M.R.A. Atia and S. Haggag., "Control of Electro-mechanical Brake-by-Wire System Using Sliding Mode Control", March 2014, International Conference on Industry Academia Collaboration, IAC 2014, Cairo, Egypt.
- Mohamed Abdel Salam Aly, Mostafa Rostom Ahmed, M. M. Taha Hedaya., "In Situ Balancing of a Rotor Supported on Dynamically coupled Supports Using Vibration Measurement", March 2010, 8th International Conference On Production Engineering & Design For Development, PEDD8, Cairo, Egypt.
- M.M. Koura. M. A. Awad, M.R.A. Atia and T. Hassan," Development of a computer vision system for metrological applications", 2010, Ain Shams Journal of Mechanical Engineering, A S J M E, Cairo, Egypt.
- Shaban I. A. Moustafa, M. Mahdy, and M. R. A. Atia, "Geometrical Errors of Coordinate Measuring Machines (CMMs) Using the Reference Plate Method and Laser Tracer Technique", 2009, Ain Shams Journal of Mechanical Engineering, A S J M E, Cairo, Egypt.
- Shaban I. A. Moustafa, Wendt, K., M. Mahdy, and M. R. A. Atia, "Investigation of scanning-strategies & probing techniques in calibration measurements", 2009, Ain Shams Journal of Mechanical Engineering, A S J M E, Cairo, Egypt.
- M. R. A. Atia and T. M. A. Maksoud, "Investigation of pneumatic glue gun method for rapid prototyping technology using neural networks", 2006, Proceedings of the ICME 2006 – 5th CIRP International Seminar on Intelligent Computation in Manufacturing Engineering, [Ischia \(Naples\), Italy](#), pp. 445-449.
- Mostafa R. A. Atia and Abdelhameed, M.M., "Design and implementation of a friction compensator based on cerebellar model articulation controller neural network", 2004, Ain Shams University bulletin, pp. 15-27.
- T. M. A. Maksoud and M. R. Atia, "Review of Intelligent Grinding and Dressing Operations", 2004, Journal of Machining Science and Technology, Vol. 8, No. 2, pp. 263-276.
- Atia, M.R.A. and Maksoud, T.M.A., "Binary image enhancement via augmented self organizing mapping artificial neural network", 2004, Proceedings of the ICME 2004 – 4th CIRP International Seminar on Intelligent Computation in Manufacturing Engineering, [Ischia \(Naples\), Italy](#).
- Maksoud T.M.A., Atia, M.R. and Koura M.M., "Application of artificial intelligence to grinding operations via neural networks", November 2003, Journal of Machining Science and technology, Vol. 7, No. 3, pp. 361-387.
- Maksoud T.M.A., Atia, M.R. and Koura M.M., "Application of Neural Networks for Monitoring and Controlling of the Grinding Process", July 2002, Proceedings of the ICME 2002 - 3rd CIRP International Seminar on Intelligent Computation in Manufacturing Engineering, 3-5, [Ischia \(Naples\), Italy](#).
- Maksoud, T.M.A., Atia M. and Koura, M., "Intelligent system for monitoring and controlling of grinding process ", September 2001, Proceedings of the international conference on advances in materials and processing technologies, Leganés, [Madrid, Spain](#).
- Maksoud, T.M.A., Atia M. and Koura, M., "Improving wheel-workpiece contact detection using a hybrid neural network", 2001, Proceedings of the Institution of mechanical engineers, [Journal of Engineering Manufacture](#), Vol. 215, Part B, pp. 1595-1602.
- Maksoud, T.M.A., Atia M. and Koura, M., "Improving wheel-workpiece contact detection using a feedforward neural network", July 2001, Proceedings of the sixteen international conference on production research, ICPR – 16, [Prague, Czech Republic](#).
- Maksoud, T.M.A., Atia, M. and Koura, M., "A new method for wheel-workpiece contact detection using a hybrid neural network", March 2001, Proceeding of the XII Workshop (I-24), University of Technology, Virtual Manufacturing Conference, [Wroclaw, Poland](#), pp. 172-186.

- El-Mousely, H., Abdel-Salam, M and Rostom, M., "Machinability of local wood species and date palm leaves' midribs (DPLM)", [Sept. 2000](#), Sci. bull. Fac. Eng. Ain Shams Univ., Vol. 35, No. 3, pp. 369-387.
- Rostom M.R. "Appropriate machines for processing of Date Palm Leaves' Midribs", December 28, Proceeding of the symposium "Industrial utilization of local raw materials for development", [1993](#), the fourth international conference on production engineering and design for development, [Cairo, Egypt](#), pp.144-158.

References

- Prof. Dr. Koura, M. M., Prof. Dr. El-Mously H. A., Dr. Hessin A., [Ain Shams University];
- Prof.Dr. Maksoud, T. M. A. [University of Glamorgan, Wales, UK]
- Prof.Dr. Ramadan Taher, Prof.Dr. Khaled Shehata [AASTMT]
- Eng. Fateh El Bab, Amr [El-Fateh Co.].
- Dr. Kenawy M. [Kenawy Industries Co.].