

## CURRICULUM VITAE

### 1. PERSONAL DATA

**Name:** Mahmoud Moustafa Mahmoud El-Gendi

**Date of Birth:** 1/6/1975

**Place of Birth:** Egypt

**Nationality:** Egyptian

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Beni Suef, Egypt

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### 2. ACADEMIC/PROFESSIONAL PARTICULARS

#### (a) Field of Specialization:

Thermo-fluid, Fluid Mechanics, Turbomachinery, Programming, Web application, Entrepreneurship

#### (b) Academic Qualifications

- Ph.D., Engineering, 2010, Nagoya University, Japan, EFFECT OF TRAILING EDGE GEOMETRY ON THE FLOW BEHAVIOR THROUGH RECTILINEAR TURBINE CASCADES
- M.Sc., Mechanical Engineering, 2003, Minia University, Egypt, EFFECT OF VARYING THE ASPECT RATIO ON THE SECONDARY FLOW GENERATED THROUGH A RECTILINEAR ACCELERATING BLADE CASCADE
- Diploma, Nanotechnology and Material Science, 2014, Beni Suef University, Egypt
- B.Sc., Mechanical Power Engineering and Energy, 1998, Minia University, Egypt

#### (c) Academic Honors and Awards

- B.Sc. very good with honor degree, Minia University, 1998
- Prize for International Publishing, Minia University, 2014
- Prize for the best research website "www.scinge.com", Minia University, 2015

#### **(d) Membership of Professional Bodies**

- Korean Society of Marine Engineering (KOSME), Regular Member, 2011
- Korean Society of Mechanical Engineers(KSME), Regular Member, 2011
- Japan Society for Aerospace and Space Science (JSASS), Regular Member, 2007
- Egyptian Engineers Syndicate, Regular Member, 1998

#### **(e) Language Proficiency**

- Arabic: Native
- English: Excellent

### **3. CAREER DETAILS**

#### **(a) Academic Positions Held**

- Associate Professor, Mechanical Power Engineering and Energy, Minia University, Egypt, 6/2018 Till now
- Assistant Professor, Mechanical Power Engineering and Energy, Minia University, Egypt, 6/2010 - 5/2018
- Assistant Lecture, Mechanical Power Engineering and Energy, Minia University, Egypt, 10/2003 - 6/2010
- Demonstrator, Mechanical Power Engineering and Energy, Minia University, Egypt, 12/1999 - 9/2003

#### **(b) Professional/Industrial Positions Held**

- Visiting Professor, Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, USA, 8/2018 – 1/2019.
- Post-doc Researcher, Mechanical Engineering, University of Ulsan - Hyundai Heavy Industry, South Korea, 6/2011 - 2/2013
- Researcher & consultant, R&D, Transtechno Egypt, Egypt, 6/2010 - 6/2011
- Research assistant, Aerospace Engineering, Nagoya University

Center of Excellence, Japan, 4/2008 – 3/2009

- Field & piping engineer, North Sector, PETROJET Company, Egypt, 11/1998 – 12/1999

### **(c) Administrative Positions Held**

- Manager of Electronic Services Unit, Faculty of Engineering, Minia University, Egypt, 10/2013 - 5/2014
- Academic advisor, Mechatronics Program, Faculty of Engineering, Minia University, Egypt, 9/2010 - 6/2011
- Editor of Chief for web page and electronic gate, Faculty of Engineering, Minia University, 11/2010 - 6/2011

## **4. Teaching**

### **(a) Summary of Courses Taught**

#### Undergraduate Courses

- PEA 215, Fluid Mechanics and Hydraulic Machines
- MPEE 213, Numerical Methods in Power Eng. and Energy
- MPEE 216, Fluid Mechanics (2)
- MPEE 221, Renewable and Renovated Energy
- PE 223, Thermodynamics, Heat and Hydraulic Machines
- MPEE 216, Fluid Mechanics

#### Graduate Courses

- MPEE 505, Measuring Devices and Control
- MPEE 501, Computers in Engineering Applications
- MPEE 525, Advanced Fluid Mechanics
- MPEE 610, Theory of Turbomachines
- MPEE 630, Computational Fluid Dynamics
- MPEE 630, Performance Analysis of Turbomachines

### **(b) Participation in Academic Accreditation**

- Mechatronics Program, coordinator, Minia University - Faculty of

Engineering , National Authority for Quality Assurance and Accreditation of Education, 5/2010 - 6/2011

- Mechanical Power, coordinator, Minia University - Faculty of Engineering, National Authority for Quality Assurance and Accreditation of Education, 3/2013 - 12/2015

### **(c) Research Students Supervised/Trained**

<b>Level</b>	<b>Number of Trainees</b>
PhD Students	2
Master Students	5
Undergraduate Students	45

## **5. RESEARCH**

### **(a) Research Interests**

- Computational Fluid Dynamics
- Turbomachinery
- Flow Control
- Natural Convection Flow
- Vortex Shedding
- Wind Energy and Turbine

### **(b) Research Grants and Fellowships**

- Grant-in-Aid for 21st Century COE "Frontiers of Computational Science."
- Project for Top Ranking School of Mechanical Engineering, Hyundai Heavy Industry, ltd and the University of Ulsan.
- Egyptian government scholarship for studying a Ph.D. degree

### **(c) Patents**

The intellectual property, number 2245, 4/2011, from ITIDA for "www.scinge.com".

### **(d) Google Scholar**

<https://scholar.google.com/citations?user=rWnqNooAAAAJ&hl=en>

### **(e) Participation in Regional & International Conferences from**

## **2011**

- The 3d International Conference in Basic and Applied science, Hurghada Egypt, 11/2015
- The Eighth KSME-JSME Thermal and Fluids Engineering Conference, South Korea, 2012.
- International Symposium on Marine Engineering and Technology, South Korea, 2011
- Autumn Symposium of Korean Society of Mechanical Engineering, South Korea, 2011

## **6. SERVICE**

### **(a) Service as Reviewer**

Journals

Energy and Building

Conferences

2<sup>nd</sup> International Workshop in Mechanical Engineering IWME-2015, Istanbul, Turkey, September 12-13, 2015

### **(b) University Service**

Faculty of Engineering, Minia University, Egypt, 2011, 2014, 2016,  
Mechanical Power and Engineering Department Committee, Member

### **(c) Public Service**

- The founder, owner and responsible for the service network website "<http://www.leanah.com/>", 2014 - Now
- The founder, owner and responsible for the first and largest science exchange network "<http://www.scinge.com/>", 2013 - Now
- The founder of Ulsan Muslim Association Web site "<http://www.ulsanmuslims.org/>", 2012 - 2013

## **7. Entrepreneurship Training**

- Start and Improve Your Business (SIYB), International Labour Organization (ILO) - Social Fund for Development (SFD), a week
- Netkite entrepreneurship Training Course, Academy of Scientific Research and Technology (ASRT), four days
- YSEP Acceleration Boot Camp, Ministry of Youth and Sports - Ministry of Communication and Information Technology, a week
- ASRT Commercialization and Technology Valuation Training Course, Academy of Scientific Research and Technology (ASRT), a week
- GESR Acceleration Boot Camp, Misr El-Kheir Organization, a week
- Qualification of the Young Leaders, Administrative Control Authority (ACA), a week

## 8. Computer Skills

Computer Skills: Microsoft Office and Windows, ICDL, Linux / Unix, Latex, FORTRAN, MPI, C++, C#, Visual Basic, HTML, Gridgen, Field View, Tecplot, Ansys (Fluent, CFX, ICEM), Asp.net, Microsoft SQL, Java Script, jQuery, CSS, Visual Studio, Photo Shop

## 9. References

- Prof. Mohammed Khalil Ibrahim, King Fahd University for Petroleum and Mineral, Email: mkhalil@eng.cu.edu.eg, *khilibrhim@kfupm.edu.sa*, 860-1858, Email: mkhalil@eng.cu.edu.eg / mkhalil@cu.edu.eg ,URL: <http://scholar.cu.edu.eg/mkhalil> ,Phone: +20-1006764242 (Cell), +20-2-3567-8653 (Office), +20-2-3586-5893 (Res.)
- Prof. Magdy Bassily, Mina University, Faculty of Engineering, Mechanical Power and Energy Department, Egypt, Master supervisor, Email: bassily1@yahoo.com
- Prof. Ramadan Bassiouny, Minia university, Faculty of Engineering, Mechanical Power Engineering and Energy Department, Egypt, Head of the Department, Email: ramadan.b@mu.edu.eg,+ 201063916415
- Dr. Abdelreheam Ali, Faculty of Science, South valley University, Egypt,

abdelreheam.abdallah@sci.svu.edu.eg, +8201026101982

- Dr. Khaled Harby, Faculty of Engineering, Minia University, Egypt, khaled.h@mu.edu.eg, khaledharby8@yahoo.com, 0034612211961

## 10. List of Publications

### Theses (2)

1. Mahmoud Moustafa Mahmoud EI-GENDI, "EFFECT OF TRAILING EDGE GEOMETRY ON THE FLOW BEHAVIOR THROUGH RECTILINEAR TURBINE CASCADES", Nagoya University, 2010.
2. Mahmoud M. EI-GENDI, "EFFECT OF VARYING THE ASPECT RATIO ON THE SECONDARY FLOW GENERATED THROUGH A RECTILINEAR ACCELERATING BLADE CASCADE", Minia University, 2003.

### Journal Papers (11)

1. El-Gendi M., "Numerical Simulation of Unsteady Natural Convection Flow inside a Pattern of Connected Open Square Cavities", International Journal of Thermal Sciences, 127 (2018) 373–383.
2. El-Gendi M., "Transient turbulent simulation of natural convection flows induced by a room heater", International Journal of Thermal Sciences, 125 (2018) 369-380.
3. Mahmoud M. EL-Gendi, and Abdelraheem M. Aly, "Numerical Simulation of Natural Convection using Unsteady Compressible Navier-Stokes Equations", International Journal of Numerical Methods for Heat & Fluid Flow, 27 (2017) 2508-2527.
4. T. Mekhail, O. Dahab, M. Fathy, M. EL-Gendi, and H. Abdel-Mohsen, "Theoretical, Experimental and Numerical Investigations of the Effect of

Blades Number on the Performance of Regenerative Blowers", INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS VOL.4 NO.4, pp. 25-36, 2015.

5. Tarek Abdel-Malak Mekhail, Omar Mohamed Dahab, Mohamed Fathy Sadik, Mahmoud Mohamed El-Gendi, Hesham Sayed Abdel-Mohsen, "Theoretical, Experimental and Numerical Investigations of the Effect of Inlet Blade Angle on the Performance of Regenerative Blowers", Open Journal of Fluid Dynamics, 2015, 5, 224-237 .
6. Mahmoud Moustafa EL-GENDI, Sang Wook LEE, Chang Yeol JOH, Geun Sik LEE, Chang Ho SON and Wui Jun CHUNG, "Elliptic Trailing Edge for a Turbine Blade: Aerodynamic and Aerothermal Effects", Trans. Japan Soc. Aero. Space Sci. Vol. 56, No. 2, pp. 82–89, 2013.
7. M. M. El-Gendi, K.-U. Lee, W. J. Chung, C.-Y. Joh and C. H. Son, "EVALUATION OF TURBULENCE MODELS IN A HIGH PRESSURE TURBINE CASCADE SIMULATION", J. Comput. Fluids Eng. Vol.17, No.3, pp.53-58, 2012.
8. M. M. El-Gendi, S.-W. Lee, C. H. Son, "On the Significance of Turbulence Models and Unsteady Effect on the Flow Prediction through A High Pressure Turbine Cascade", Journal of the Korean Society of Marine Engineering, Vol. 35, No. 7, pp. 1 ~ , 2011(ISSN 1226-9549), 2011.
9. Mahmoud M. EL-GENDI, Katsunori DOI, Mohammed K. IBRAHIM, Koichi MORI and Yoshiaki NAKAMURA, "Comparison between Hot and Cold Flow Conditions of Turbine Cascade", Trans. Japan Soc. Aero. Space Sci. Vol. 52, No. 178, pp. 206–212, 2010.
10. Mahmoud M. EL-GENDI, Mohammed K. IBRAHIM, Koichi MORI and Yoshiaki NAKAMURA, "Novel Flow Control Method for Vortex Shedding of Turbine Blade", Trans. Japan Soc. Aero. Space Sci. Vol. 52, No. 178, pp. 206–212, 2010.
11. Mahmoud M. EL-GENDI, Mohammed K. IBRAHIM, Koichi MORI and Yoshiaki



NAKAMURA, "Energy Separation in High Subsonic Turbine Cascade", Trans. Japan Soc. Aero. Space Sci. Vol. 52, No. 178, pp. 206–212, 2010.

### **Conference Papers (12)**

1. Mahmoud M. El-Gendi, "Simulation of Natural, Mixed, and Forced Convection Flow Inside an Enclosure", In Proceedings of ICFD12: Twelfth International Conference of Fluid Dynamics 19-20 December, 2016, Le Méridien Pyramids Hotel, Cairo, EGYPT.
2. Mahmoud M. El-Gendi, "Novel Hydraulic Speed Bump for Electrical Power Generation", The 3rd International Conference of Advanced Applied Sciences (ICAAS-III), 17th -20th November 2015, Hurghada, Egypt.
3. Mahmoud M. El-Gendi, Kyoung-un Lee and Sang-Wook Lee, "Comparison between Steady and Unsteady Flow Predictions through High Pressure Turbine Cascade", In Proceedings of The Eighth KSME-JSME Thermal and Fluids Engineering Conference, GSF26-020, 2012.
4. M.M. El-Gendi and K.-U. Lee, "Unsteady Flow Simulation of Transonic High Pressure Guide Vane", In Proceedings of Autumn Symposium of Korean Society of Computational Fluid Engineering, pages 166 – 169, 2011.
5. Mahmoud M. El-GENDI and Kyoung-Un Lee, "Numerical Simulation of Transonic Flow through High Pressure Turbine Cascade", In Proceedings of Autumn Symposium of Korean Society of Mechanical Engineering, pages 2157-2161, 2011.
6. Mahmoud M. El-GENDI, "Proposed Trailing Edge Geometry for A Turbine Cascade", In Proceedings of International Symposium on Marine Engineering and Technology, pages 231- 234, 2011.
7. Mahmoud M. El-GENDI, Kyoung-un LEE and Sang-Wook LEE, "Unsteady Flow Predictions through High Pressure Turbine Cascade", In Proceedings of International Symposium on Marine Engineering and Technology, pages 282-285, 2011.
8. Mahmoud M. El-GENDI and Mohammed K. IBRAHIM, "Effect of Turbulence

Model on the Calculated Flow through Rectilinear Turbine Cascade", In Proceedings of The Second International Conference on Energy Engineering (ICEE2), 2010.

9. Mahmoud M. El-Gendi, Mohammed K. Ibrahim, Koichi Mori, and Yoshiaki Nakamura, "Elliptic Trailing Edge for a High Subsonic Turbine Cascade", In Proceedings of KSASS- JSASS Joint International Symposium on Aerospace Engineering, pages 38-42, 2008.
10. Mahmoud M. El-GENDI, Mohammed K. IBRAHIM, Koichi MORI, and Yoshiaki NAKAMURA, "Effect of Trailing Edge geometry on a Turbine Blade Base Pressure", In Proceedings of International Symposium on Frontiers of Computational Science, pages 197-204, 2008.
11. Mahmoud El-Gendi, M. K. Ibrahim, Koichi Mori, and Yoshiaki Nakamura, "Numerical Simulation of Trailing Edge Vortex Shedding in a High Subsonic Turbine Cascade", In Proceedings of JSASS-KSASS Joint International Symposium on Aerospace Engineering, pages 8-11, 2007.
12. Bassily Hanna, M., El-Kersh, A.M., Kotb, N., El-Gendy, M., "Effect of Varying the Aspect Ratio on the Flow Behavior Through Rectilinear Accelerating Blade Cascade", The 3rd Minia University International Conference for Advanced Trends in Engineering, Minia-Egypt, 3-5 April 2005.