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**Current Title (including department and university): Emirate Professor, Dept. of Mech. Power Engineering, Faculty of Energy Engineering-Aswan, Aswan University, Egypt,**

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### **FIELDS OF SPECIALIZATION**

- 1- Thermo-Fluids.
- 2- Renewable Energy (Solar, Hydro, Thermo-Electric, Hydrokinetic Saviniou Rotor)
- 3- Jet Pumps, Air Ejectors.

### **DEGREES**

**-Degree: Ph.D., Aeronautical Engineering, Dept.: Aeronautical Engineering, School: Faculty of Engineering, Cairo University, Egypt, Graduation Year: 1999. Thesis Title: Thrust Control Using Combined Vanes and Plug Arrangements.**

**-Degree: M.Sc., Mechanical Engineering, Dept.: Aeronautical Engineering, School: Faculty of Engineering, Cairo University, Egypt, Graduation Year: 1991. Thesis Title: Aerodynamic Characteristics of Slender Wing Body Configurations.**

**-Degree: B.Sc., Mechanical Engineering, Dept.: Mechanical Engineering, School: Faculty of Engineering, Cairo University, Egypt, Graduation Year: 1983. Project Title: Design of Blades of Turbo-jet Engines.**

## **ACADEMIC AND INDUSTRIAL POSITIONS**

- 1- Emirate Professor, Dept. of Mech. Power Engineering, Faculty of Energy Engineering-Aswan, Aswan University, Egypt, Aug. 05, 2020 till now.**
- 2- Vice Dean for Post Graduate Studies and Research, Faculty of Energy Engineering , Aswan University, Aswan, February, 2016 till Aug. 04, 2020.**
- 3- Dept. chair, Faculty of Energy Engineering, Aswan University, Aswan, Mech. Engineering December 2015 till September 30, 2018.**
- 4- Professor, Dept. of Mech. Engineering, Faculty of Engineering-Rabigh, King Abdul Aziz University, KSA, September 2014 till June 28, 2015.**
- 5- Professor, Dept. of Mech. Power Engineering, Faculty of Energy Engineering-Aswan, Aswan University, Egypt, Feb. 27, 2013 till Aug. 04, 2020.**
- 6- Interim Dept. Chair, Dept. of Mech. Engineering, Faculty of Engineering-Rabigh, King Abdul Aziz University, KSA, December 19, 2009 till November 20, 2011.**
- 7- Associate Professor, Dept. of Mech. Engineering, Faculty of Engineering-Rabigh, King Abdul Aziz University, KSA, October 28, 2009 till September 2014.**
- 8- Vice Dean for Society Service and Environment Development, Faculty of Energy Engineering-Aswan Jan. 17, 2009 - October 27, 2009.**
- 9- Visiting Scholar and Adjunct Professor, Fall 2008 semester and foreign guest researcher, Department of Mechanical and Energy Engineering, College of Engineering, University of North Texas, USA, July 1, 2008 till December 31, 2008.**
- 10- Associate Professor, Dept. of Mech. Power Engineering, High Institute of Energy-Aswan, South Valley University, Egypt, Jan. 23, 2007- Feb. 26, 2013.**
- 11- Foreign researcher; Department of Mechanical System Engineering, Gunma University, Japan, March 9, 2001- September 12, 2001.**
- 12- Assistant Professor, Dept. of Mech. Power Engineering, High Institute of Energy-Aswan, South Valley University, Egypt, Oct. 18,1999 – Jan. 22, 2007.**
- 13- Assistant Lecturer, Dept. of Mech. Power Engineering, High Institute of Energy-Aswan, South Valley University, Egypt, May 25,1997- Oct. 17,1999.**

**Responsibilities: Teaching, Research, Specifying the labs specifications, Sharing in conferences organization, Member of “Reviewers committee of promotion to Professor and Associate Professor (No. 12, 2016-2019 and No. 13; 2019-2022), Supreme Council of Universities, Egypt .**

**14- Engineer, Arab British Dynamics Co., Joint Venture between “Arab Organization Industrization” and “British Aerospace”, Jan. 1, 1985- May 24,1997.**

**Responsibilities: Giving guidance to technicians to produce complicated items, Giving help to planning engineers, achieving the quality requirements**

### **RESEARCH PROJECTS**

- Year(s) of project, synopsis of thesis or abstract, was it published and if so, where?

**1-Participation in “Analysis of Energy Consumption Pattern and Environmental Indicators for the Residential Sector of Aswan City,” joint research project between High Institute of Energy, Aswan and Organization for Energy Planning , Cairo, Egypt, June 2004.**

**2- Participation in “Development of higher Education teaching modules on the Socio-economic Impacts of the Renewable Energy implementation/DESIRE,” DESIRE Project is an EU funded project, in which 10 educational and research institutions from the EU-MENA region are partnered, 2015-2019.**

### **CONSULTANT**

- Year, job title, location, responsibilities...
- Year, job title, location, responsibilities...

### **AWARDS**

**1- Program of Industrial Development and Research, Arab Organization Industrization.**

**Research Title: “Utilization of Floating Plug in Nozzles”, Nov. 5, 1996**

**2- Conference co-chair; 5<sup>th</sup> International Conference on Energy Engineering, Faculty of Energy Engineering – Aswan University-EGYPT, December 24-26, 2019, <http://www.icee-egypt.org>**

### **PROFESSIONAL RECOGNITION**

### **PATENTS, Books’PUBLICATIONS**

**(1) Walid Aissa, Salama Abdel-Hady and Kamal Ahmed, INVESTIGATION OF LOW HEAD HYDRAULIC AIR COMPRESSOR PERFORMANCE, ISBN: 978-3-659-78005-9, Lab Lambert Academic Publishing, Germany, 2015.**

**(2) Walid Aissa, Tarek Mekhail and Osama Hamdy, Experimental and Numerical Study of Dilute Gas-Solid Flow inside a 90° Horizontal Square Pipe Bend, ISBN: 978-3-659-78940-3, Lab Lambert Academic Publishing, Germany, 2015.**

### **Conferences and Journals publications:**

**(1) Aissa, W. A. and Hashem, A. A., “Experimental Analysis of Thrust Vector Control Using External**

- Vanes,” XV ISABE International Symposium on Airbreathing Engines, Paper No. 1186, Sept. 2001, Bangalore, India.
- (2) Hashem, A. A. and Aissa, W. A., “Experimental Investigation of Axisymmetric Nozzle-Vanes-Plug TVC Arrangement,” JSAS 15th. / Japan - Korea Joint International Symposium, Paper No. 2F4, Oct. 2001, Gifu, Japan.
- (3) Hashem, A. A. and Aissa, W. A., “External Vanes Floating Plug Nozzle Thrust Vector Control,” Seventh International Conference of Fluid Dynamics and Propulsion, Dec. 18-20, 2001, Cairo, Egypt.
- (4) Aissa, W. A., “Effect of throat length on the performance of an air ejector,” XVI ISABE International Symposium on Airbreathing Engines, Paper No. 1121, Cleveland, Sept. 2003, USA.
- (5) Aissa, W. A., “Experimental and Analytical Investigation of an Air Jet Ejector ,” Mansoura 4th International Engineering Conference, Sharm El-Shiekh, Egypt, April 20-22, 2004.
- (6) El-Salak, M. S., Aissa, W. A., and Gelany, A. M., “An Experimental Investigation for Aeration by Jet Pump with Multiple Jet Nozzles in the Driving Jet Flow,” International Conference on Thermal Engineering: Theory and Applications, Beirut, Lebanon, May 31- June 4, 2004.
- (7) El-Salak, M. S., Aissa, W. A., and Gelany, A. M., “An Experimental Investigation for the Performance of a Jet Pump with Multiple Jets in the Driving Jet Flow,” International Conference on Thermal Engineering: Theory and Applications, Beirut, Lebanon, May 31- June 4, 2004.
- (8) Aissa, W. A., “Performance Analysis, Cost Estimation and an Enhanced Design of Waste Water Treatment Unit,” Journal of Engineering Sciences, Assiut University, Vol. 32, No. 4, pp. 1627-1645, Sept. 2004.
- (9) Aissa, W. A., “Experimental Analysis of Axisymmetric Impinging Jet Flow,” Journal of Engineering and Applied Science, Cairo University, Vol. 52; No. 5, pp. 941-960, ISSN 1110-1903, 2005, Accepted for publication in Journal of Computational and Applied Mechanics, A publication of the University of Miskolc, Hungary.
- (10) Aissa, W. A. and Mohammadein, A. A., “Joule Heating Effects on a Micropolar Fluid Past a Stretching Sheet With Variable Electric Conductivity,” Journal of Computational and Applied Mechanics, Vol. 6, No. 1, pp. 3-13, 2005.
- (11) Aissa, W. A., “Mathematical Modeling of an Air Ejector Using Shock-Expansion Theory,” Fourth International Conference on Computational Heat and Mass Transfer, Paper No: ICCHMT'05 –145, May 17-20, 2005, Paris –Cachan, France.
- (12) Aissa, W. A., “Effect of Multiple Nozzles on Air Ejector Performance,” 17th International Symposium on Airbreathing Engines: ISABE 2005, Paper No. 1291, Munich, Sept. 2005, Germany.
- (13) Aissa, W. A. and Mohammadein, A. A., “Chemical Reaction Effects on Combined Forced and Free Convection Flow of Water at 4°C Past a Semi-Infinite Vertical Plate ” Journal of Engineering Sciences, Assiut University, Vol. 34, No. 4, pp. 1225-1237, July 2006.

- (14) Mohammadein, A. A. ,Aissa, W. A. and Gorla, R. S. R.," The effect of radiation on mixed convection flow past a stretching surface," Heat and Mass Transfer Journal, Springer-Verlag, Berlin /Heidelberg, ISSN 0947-7411 (Print) 1432-1181 ,DOI 10.1007/s00231-007-0334-8, September 2007.
- (15) El-Amin, M. F., Aissa, W. A. and Salama, A., "Effects of Chemical Reaction and Double Dispersion on Non-Darcy Free Convection Heat and Mass Transfer", Transport in Porous Media, Springer Netherlands, ISSN , 0169-3913 (Print) 1573-1634 , DOI 10.1007/s11242, February 2008.
- (16) Aissa, W. A., "Effects of radiation on mass and heat transfer of a fluid through a porous medium over a stretching sheet with suction and internal heat generation (or absorption," Second International Conference, Recent Advances in Experimental Fluid Mechanics, Paper No: RAEFM060, March 3-6, 2008, Vijayawada, Andhra Pradesh, India and International Journal of Fluid Mechanics Research, Volume 35, No. 03, 2008, pp. 203-218 ISSN 1064-2277.
- (17) Aissa, W. A., "Effect of inlet conditions on centrifugal pump performance," Second International Conference, Recent Advances in Experimental Fluid Mechanics, Paper No: RAEFM061, March 3-6, 2008, Vijayawada, Andhra Pradesh, India and International Journal of Fluid Mechanics Research, Volume 36, Issue 02, 2009, pp. 97-113, ISSN 1064-2277.
- (18) Aissa, W. A., Eissa, M. S., Abdel-Fadeel, W. A. and Mohamed, I. K., "Experimental and numerical study of low aspect ratio asymmetric diffuser," Second International Conference, Recent Advances in Experimental Fluid Mechanics, Paper No: RAEFM062, March 3-6, 2008, Vijayawada, Andhra Pradesh, India and Journal of Engineering Sciences, Assiut University, Vol. 37, No. 2, pp. 363-374, March 2009.
- (19) Aissa, W. A., Abdel-Hady, Salama and Ahmed, K. A., "Performance analysis of low head hydraulic air compressor," Second International Conference, Recent Advances in Experimental Fluid Mechanics, Paper No: RAEFM059, March 3-6, 2008, Vijayawada, Andhra Pradesh, India and Smart Grid and Renewable Energy J., 2010, 1: 15-24, [doi:10.4236/sgre.2010.11003](https://doi.org/10.4236/sgre.2010.11003) Published Online May 2010.
- (20) Mekhail, T. A., Aissa, W. A., Hassanein, S. A. and Hamdy, O., "CFD Simulation of Dilute Gas-Solid Flow In 90° Square Bend," The Second International Conference on Energy Engineering ICEE-2, December, 2010, Aswan, Egypt and Energy and Power Engineering J., 2011, 3, 246-252. [doi:10.4236/epe.2011.33031](https://doi.org/10.4236/epe.2011.33031) Published Online July 2011.
- (21) Sharma , A., Boetcher, S. K. S., Aissa, W. A. and Traum, M. J., "Impact of Interstitial Mass Transport Resistance on Water Vapor Diffusion Through Southern Mills Defender TM 750 Fabric Layers," Proceedings of AJTEC2011 ASME/JSME 2011 8th Thermal Engineering Joint Conference March 14-17, 2011, Honolulu, Hawaii, USA, Paper No.: AJTEC2011-444485, Journal of Thermal Science and Engineering Applications, Transactions of the ASME, Vol. 4, 041001, 2012, 1-9.
- (22) Aissa, W., El-Sallak, M. and Elhakem, A., "An experimental investigation of forced convection flat plate solar air heater with storage material," Thermal Science J. ; Vol. 16, No. 4, 2012, pp. 1205-1216.
- (23) Aissa, W. A. and Mohamed, I. K., "Numerical Evaluation of the Aerodynamic Performance of U-shape Building Section: Comparisons between Different Simulations", Life Science Journal 2013;10(3), pp. 2684- 2690.
- (24) Aissa, W. A., Mekhail, T. A., Hassanein, S. A. and Hamdy, O., "Experimental and Numerical Study of Dilute Gas-Solid Flow inside a 90° Horizontal Square Pipe Bend," Open Journal of Fluid Dynamics, 2013, 3, 331-339. <http://dx.doi.org/10.4236/ojfd.2013.34040> Published Online December 2013.
- (25) Aissa, W., El-Sallak, M. and Elhakem, A., "Performance of solar dryer chamber used for convective drying of Sponge-Cotton," Thermal Science J., 2014, Vol. 18, Suppl. 2, pp. S451-S462.

(26) Mohamed, I. K. and Aissa, W. A. "An Experimental Study of the Ability to Recover Waste Heat from an Old Automotive Engine Exhaust", International Journal of Engineering Trends and Technology (IJETT), Vol. 29, No. 2, 91-96 November 2015. ISSN:2231-5381. www.ijettjournal.org. published by seventh sense research group, [doi: 10.14445/22315381/IJETT-V29P218](https://doi.org/10.14445/22315381/IJETT-V29P218).

<http://www.ijettjournal.org/2015/volume-29/number-2/IJETT-V29P218.pdf>.

(27) Mohamed, I. K. and Aissa, W. A. "Effect of corner modification on two-dimensional turbulent flow around a square cylinder with incidence", Journal of Engineering Sciences, Assiut University, Vol. 44, No. 1, January 2016 , pp. 91 – 102.

(28) Aissa, W. A. and Mohamed, I. K." Recover of waste heat from an old automotive engine exhaust", International Conference on Mechanical and Aerospace Engineering (ICMAE), Proceedings of the 69th IRES International Conference, Jeddah, Saudi Arabia, 24th-25th May 2017, ISBN: 978-93-86291-88-2, International Journal of Mechanical And Production Engineering, Volume- 5, Issue-7, Jul.-2017, ISSN: 2320-2092, <http://iraj.in>, pp. 85-89.

(29) Ramadan, A. , Aissa, W. A. , Hemida, M. and Abdel-Fadeel, W. A."Numerical Investigation of Hydrokinetic Savinious Rotor with Two Shielding Plates", Applications of Modelling and Simulation (AMS), ISSN 2600-8084, Malisian Simulation Society,VOL 3, NO. 2, 2019, 85-94.

(30) Khaled, M., Noby, H. ,Aissa, W. A. and El-Shazly , A. H. “Facile Fabrication of Porous and Hydrophilic Polystyrene Membranes using Recycled Waste”, 2nd International Conference of Chemical, Energy and Environmental Engineering (ICCEE 2019), July 16-18, 2019 and Materials Science Forum, ISSN: 1662-9752, Vol. 1008, pp 39-46, doi:10.4028/www.scientific.net/MSF.1008.39 , © 2020 Trans Tech Publications Ltd, Switzerland.

(31) Hassan, H., Aissa, W. A., Eissa, M. S. and Abdel-Mohsen, H. “Effect of HHO gas addition on the performance and emissions of SIE”, 2nd International Conference of Chemical, Energy and Environmental Engineering (ICCEE 2019), July 16-18, 2019. (32) Khaled, M., Noby, H. Mansor, Eman S, El-Shazly , A. H. and ,Aissa, W. A. “Water Purification using Recycled Polymeric Microfiltration Membranes”, Proceedings of 5th International Conference on Energy Engineering, December 24-26, 2019 - Aswan – Egypt and [International Journal of Applied Energy Systems, Vol. 2, No. 2, July 2020 ISSN: 2636 - 3712 \(Printed Version\) ISSN: 2636 - 3720 \(Online Version\), DOI: 10.21608/IJAES.2020.169930DOI: 10.21608/IJAES.2020.169930](#).

(33) Hassan, H., Aissa, W. A., Eissa, M. S. and Abdel-Mohsen, H. “

The Effect of Introducing HHO Gas into the Intake Manifold of Spark Ignition Engine (SIE)”, Proceedings of 5th International Conference on Energy Engineering, December 24-26, 2019 - Aswan – Egypt and [International Journal of Applied Energy Systems, Vol. 2, No. 2, July 2020 ISSN: 2636 - 3712 \(Printed Version\) ISSN: 2636 - 3720 \(Online Version\), DOI: 10.21608/IJAES.2020.169894](#).

(34) Elian, A. A., Aissa, W. A. Dahab, O. M. and Cidek, M. F.“

Enhancement of Water Cooled Internal Combustion Engines Using Peltier Effect”, Proceedings of 5th International Conference on Energy Engineering, December 24-26, 2019 - Aswan – Egypt and International Journal of Applied Energy Systems, Vol. 2, No. 2, July 2020 ISSN: 2636 - 3712 (Printed Version) ISSN: 2636 - 3720 (Online Version) International Journal of Applied Energy Systems, Vol. 2, No. 2, July 2020 ISSN: 2636 - 3712 (Printed Version) ISSN: 2636 - 3720 (Online Version), DOI: [10.21608/IJAES.2020.169449](https://doi.org/10.21608/IJAES.2020.169449).

(35) Aissa, W. A., Eissa, M. S. and Mohamed, A. H. H. , “Experimental and Theoretical Investigation of Water Jet Pump Performance”, International Journal of Applied Energy Systems, Vol. 3, No. 1, January 2021, ISSN 2636 – 3712, DOI: [10.21608/IJAES.2020.169930](https://doi.org/10.21608/IJAES.2020.169930).

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(37) Eissa, Mohamed S., Walid A. Aissa, Hassan, Haroun and Abdel-Mohsen, Hesham S. " Improving SI Engines Performance to Obtain Lower Operating Cost and Emissions Using In-situ Produced HHO Gas”, APPLICATIONS OF MODELLING AND SIMULATION, 6, 2022, 107-114.

(38) Hassan, Haroun , Aissa, Walid A. , Eissa, Mohamed S., Hesham S. Abdel-Mohsen, "Enhancement of the performance and emissions reduction of a hydroxygen-blended gasoline engine using different catalysts”, Applied Energy 326 (2022) 119979.

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#### References:

1. **Prof. Dr. Aly Abdel-Fatah Hashem. Aeronautical Dept., Faculty of Engineering, Cairo University, Cairo. Egypt.**
2. **Prof. Dr. Ibrahim Mahmoud El-Moghazy. Mechanical Engineering Dept., Faculty of Engineering, Minia University, Minia, Egypt.**
3. **Prof. Dr. AbdelFattah Mohamed El-Kersh. Mechanical Engineering Dept., Faculty of Engineering, Minia University, Minia, Egypt.**