**CURRENT ACTIVITIES INTEREST**

**Teaching**

**Teaching and preparing syllabus related to Mechanical and Aerospace engineering areas for undergraduates and postgraduates.**

**Research**

**Mechanical and Aerospace Engineering areas that include research and development in “flow induced vibration, flow control, Heat transfer, Nonlinear Modeling, Optimization and Data modeling and sensors technology”.**

## EDUCATION

**Ph.D. Mechanical and Aerospace Engineering 1994- 1999Illinois Institute of Technology. Chicago, IL, USA**

**M.Sc Mechanical Engineering Department. 1986- 1990Cairo University, Egypt**

**B.S. Mechanical and Power Engineering Department. 1979- 1984Cairo University, Egypt**

CAREER POSTIONS

Professor 2017-Date

Mech. Eng. Dept.

National Research Center

**TEACHING EXPERIENCE**

**Associated professor**

**Al Baha University, Mechanical Engineering Dept., SKA 2008-2013**

THESIS SUPERVISION

MSc theses

“Thermal and Economical Characteristics of Cooling Tower” 2014-Date

“Thermal Control of Satellite” 2007

“Performance Characteristics of Heat Exchanger Considering 2003

Fouling Effect”

PROJECTS International

"Study of the Flow Structures Near a Stationary and Oscillating Impingement plate in a semi- confined configuration" (Joint project between Michigan State University and NRC, (Egyptian PI ,fund 60, 000 US $)

National

**“Use of Egypt natural resources to produce biodiesel for jet fuel blends” ( stdf 2013- 2016)**

**“A Hydrologic and Hydrogeochemical Study of the South Valley (Toshka) Project to Optimize it’s Impacts and Reduce its Drawbacks” Cairo University Research Institute for Groundwater, Ministry of Water Resources and Irrigation And Argonne National Laboratory 1999 -2001**

Publications (International Conferences)

1. **A. Naguib,M. El-Anwar,and A.M. Abouel-Fotouh “Array Measurements of the Unsteady Surface Pressure in a Sharp-Edged Impinging Jet” W. Jiang, K. Zhang, , AIAA 2010-4851 July 2010**
2. M. El-Anwar, K. Zhang, A. Naguib, A.M. Abouel-Fotouh “Pressure Fluctuations Produced by a Jet Impinging on a Wall at Normal and Oblique Incidence”, “Pressure”, 7th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, 28 June – 03 July 2009, Krakow,
3. **K. Y. Maalwi and A. M. Abouel –Fotouh, “Stability of Elastically Restrained Pipes Containing Fluid” Eng. Division 1st conf., On Green and Advanced Eng. Tech. Jan 2004.**
4. **G. E. Diwani, A M. Abouel\_fotouh, S. I hawash and N. K. Attia, “New Algorithm for Monomers Fractions Predictions in Trepolymer Reaction System Using Optimization Technique” Eng. Division 2nd International conference in engineering science and technology, Nov. 2005**
5. **K. A. Abed, M. M. K. Fouad. A. M. Abouel-Fotouh and H.S. Moussa. ''Performance Characteristics of Shell and Tube Heat Exchangers' Division 1stinternational conf. On Green and Advanced Eng. Tech. Jan 2004.**
6. **M. M Kamel, O. M F, Elbahar. M A.Habib and A. M.Abouel Fotouh, “Measurements of Particle Size and Velocity Distributions in Air Blast Atomizers by an Optical Diagnostics Technique“ 7the International Conference of the Mechanical Power Engineering in Cairo 17-20 DEC 1990.**

PUBLICATIONS (Journals)

1. **K.Y. Maalawi, A. M. Abouel-Fotouh, M. El-Bayoumi, Khaled Ahmed Ali Yehia “Design of Composite Pipes Conveying Fluid for Improved Stability Characteristics” International Journal of Applied Engineering Research, 11 (2016) 7633-7639**
2. **I. A. Khattab, A. M. Abouel-Fotouh, M. F. Alebrahim and H. S. Hussein RJPBCS . “Effects of Operation Conditions on the Apparent Rate Constant of Copper Removal in a Packed-Bed Electrolytic Reactor”, 7, (2016) 594- 605**
3. **A.M. Abouel-Fotouh, A.M. Attia, N.K, S. Abo El-Enin, El Diwani, G, Abdo, S. M., Ali, G “Biomass Production from Blue Green Microalgae under Nutrient Stress” International Journal of ChemTech Research, 8 (2015) 483-489**
4. **A.M. Abouel-Fotouh, A.M. Attia, N.K, S. Abo El-Enin, El Diwani, G, Abdo, S. M., Ali, G “Determination of Maximum Green Microalgae Biomass using Response Surface Methodology”. International Journal of ChemTech Research, 8 (2015) 290-296**
5. ***S. Ahmed* Abd El-Hamid, Ahmed H. Eissa, A.M. Abouel-Fotouh and Mona A. Abdel-Fatah “Comparison Study of Different Structures of PID Controllers“ *Research Journal of Applied Sciences, Engineering and Technology* 11(6): 645-652, 2015**
6. ***S. Ahmed Abd El-hamid,* Ahmed H. Eissa and A. M. Abouel-Fotouh *“*Application of Feed-Forward Internal Model Control to Time Varying FOPDT Temperature Process*”* I*nternational Journal of Applied Engineering Research, 10 (2015) 35914-35917***
7. **A.M. Abouel Fotouh and H. E. Fawaz, “Investigation of the Effect of Inducing Impingement Wall Velocity on the Flow Field and the Heat Transfer Process in a Semi Confined Impinging Configuration” *Current Science International* 3(3): 279-289, 2014**
8. ***Ahmed S.* Abd El-hamid, Ahmed H. Eissa, A. M. Abouel-Fotouh and H. E. Fawaz. “Adaptive PID Control Parameters Optimization Using Trust-Region-Reflective Algorithm for pH Neutralization Process”Ahmed SInternational Journal of Scientific & Engineering Research” 5, (2014) 702-212**
9. **A.M. Abouel-Fotouh, A.I. Elsharkawy, I. Shabakaand A. Elfar. “The Effect of Satellite Orientation on Satellite Surface Temperature Distributions” *Journal of Applied Sciences Research* 2(12) pp 1286-1292 2006**
10. N. El-Chazly, K.A. Yehia and A.M. Abouel-Fotouh **“Investigation of the Efficiency of Hydrogen Storage Systems in the Form of Metal Hydrides”** Journal of Applied Science Research, 2(10): 765-772, 2006
11. M.E. Abd El-Samie, M.A. Badr, A.M. Abou El-Fotouh” **Modelling of Hydrogen Produced by Photo-Bioreactor”** Journal of Applied Sciences Research, 2(10): 757-760, 2006
12. A.M. Abouel-Fotouh, A.I. Elsharkawy, I. Shabaka and A. Elfar “**The Effect of Satellite Orientation on Satellite Surface Temperature Distributions”** Journal of Applied Sciences Research, 2(12): 1286-1292, 2006
13. **A. M. Abouel-Fotouh**, I. Shabaka, A. Elsharkawy, and A. Elfar **“Material Selection for Satellite Passive Thermal Control”** Journal of Applied Sciences Research 2 (12) pp1106-11112006
14. **N. El-Chazly, K.A. Yehia and A .M. Abouel-Fotouh “Investigation of the Efficiency of Hydrogen Storage Systems in the Form of Metal Hydrides”,** ***Journal of Applied Sciences Research,* 2 (10) pp 765-772, 2006**
15. **K. Y. Maalwi and A. M. Abouel –Fotouh “Investigation of Instability of Flexible Pipes Transporting Fluids “, *Journal of Engineering and Applied Sciences* vol 52. Dec 2005 pp. 1199-1217 2005**
16. G. El**.-**Diwani, **A. M. Abouel-Fotouh** S. I. Hawash and F. Said **“Kinetic Study for Potassium Sulfate Production from Potassium Chloride in Ammoniacal Solution”**. AFINIDAD 61(511) pp225-231 2004.
17. **D.R.Williams, H. Mansy, A. Abouel-Fotouh, “Three-Dimensional Subharmonic Waves During Transition in the Near Wake Region of a Cylinder", Phys.Fluids vol.8 No.6, June 1996.**
18. **Bernhardt, J. Mihailovic, C.F. Jines, A. Abouel-fotoh, T.C. Corke, and D.R. Williams “Instantaneous pressure distribution around an oscillating cylinder” J.E., APS Bulletin wake transition,” J. Fluid Mech. https://doi.org/JFLSA7328, 345 (1996)**