

Faculty Name:	Prof. Abdelhamid. K. Mazher
Education:	<ul style="list-style-type: none"> ➤ Ph.D. Aerospace Engineering, Georgia Institute of Technology, 1987. ➤ MS Aeronautical Engineering, Cairo Univ. ➤ BS Aeronautical Engineering, Cairo Univ., June 1973
Academic experience:	<ul style="list-style-type: none"> ➤ Professor, Nuclear Engineering Department, College of Engineering, King Abdul-Aziz University, Jeddah, KSA. 2013 - Present ➤ Adjunct Professor, WSU Tri-Cities, WA. ➤ Clinical Professor, WSU Tri-Cities, Richland WA, Jan. 2010 –May 2013. ➤ Consultant associate with Farawila et al., Inc. Richland Washington 2007-2013. ➤ Professor, Aerospace Science Engineering Department, Tuskegee University, Alabama, 2000-2007. ➤ Visiting Professor, Computational Physics and Engineering Division, Oak Ridge National Lab, Oak Ridge, Tennessee, 37831, 2001. ➤ Aeroscience Specialist, KBZ Air College, UAE , 1991-2000. ➤ Engineering Consultant, Atlanta, GA, 1992-1998. ➤ Research Scientist, School of Aerospace/Mechanical Engineering, Georgia Institute of Technology, Atlanta, Georgia, 1987-1992. ➤ Research Assistant, School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, Georgia, 30332, 1980-1987 ➤ Arabic language teacher, North Atlanta High School, Atlanta GA, 1986. ➤ Instructor, Aeronautical and Mechanical engineering, Cairo University, 1973-1980.
Non-academic experience	<ul style="list-style-type: none"> ➤ A broad range of working experience in mechanical, civil and aerospace engineering to model, and solve engineering problems using analytical, computer, and theoretical skills. ➤ Wrote and submitted many research proposals to DOE, NASA, USAD, and NSF ➤ Training of UAE Air Force officers to use 6DOF code to simulate missile dynamics. ➤ Application of Singular Value Decomposition (SVD) techniques to filter the noise. ➤ Computational Fluid Dynamics (CFD) and grid generation techniques of internal flow through 3D branching geometry applied to biological fluid flow of blood in arteries. ➤ Effects of sand on the engine's lifetime of Jet Ranger Helicopter in desert environment. ➤ Computation of 3D helicopter plume characteristics in forward flight and hover. (GTRI) ➤ Calculations of non-Newtonian flow fields in a 2D cavity.
Current membership in professional organizations	<ul style="list-style-type: none"> ➤ Sigma Xi, the Scientific Research Society of North America, ASEE, AIAA, ASME.
Honors and awards	<ul style="list-style-type: none"> ➤ Award for 10 years of dedicated work, Georgia Institute of Technology,

	<p>Atlanta, GA, USA, 1990.</p> <ul style="list-style-type: none"> ➤ Graduate Student Senator, Georgia Institute of Technology, 1985 -1986. ➤ Cairo University Award (Academic honor) in Aeronautical Engineering. ➤ “Computational Modeling of Circulating Fluidized Bed Reactors,” Department of Energy, three years (2006-2009), \$442,206. ➤ “Computational Simulation of a Novel Circulating Fluidized Bed Reformer,” USAD, two years (2006-2008) \$58,726. This is a joint research grant with the chemical engineering department, Cairo University, Egypt. ➤ “Modeling Turbulence using Variational Techniques,” NASA FAR, three years (2003-2006), \$300,000. ➤ Fulbright Scholar: Engineering education research award for the summer of 2006. The aim of the Fulbright research award is to investigate the suitability of ABET 2000 EC to developing countries.
Service Activities	<ul style="list-style-type: none"> ➤ Graduate Committee, WSUTC, Washington, Multidisciplinary Committee, Tuskegee University, ➤ Evaluation, Tests & Examinations Committee, Air College, UAE Air Force. & Curriculum development committee for UAE Air Force
Publications & presentations from the past five years	<ol style="list-style-type: none"> 1. Mo, C., Mazher, A. k., and Clark, W. W., “Energy Harvesting with Piezoelectric Circular Membranes under Pressure Loading,” To be submitted to the Journal of Smart Materials and Structures. 2. Olaniyi Balogun, Changki Mo, A. K. Mazher, “Exergy Analysis Of Gas Turbine-Burner Engine”, INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH VOLUME 3, ISSUE 1, JANUARY 2014 3. A.K. Mazher and Changki Mo, “Dynamic Modeling of Turbulence”, A refereed paper , proceedings of ASME 2013 International Mechanical Engineering Congress & Exposition, November 15-21, 2013, SD, USA. 4. Olaniyi A. Balogun , Changki Mo , A. K. Mazher, and John C. Brigham, “THREE-DIMENSIONAL NUMERICAL SIMULATION OF THERMOMECHANICAL CONSTITUTIVE MODEL FOR SHAPE MEMORY POLYMERS WITH APPLICATION TO MORPHING WING SKIN,” Proceedings of the ASME 2013 Conference on Smart Materials, Adaptive Structures and Intelligent Systems. September 16-18, 2013, Snowbird, Utah, USA. 5. Mansour K. Mansour and A. K. Mazher, A Modified Algorithm for Computing the Eigenvalues and Eigenvectors Using the Bimodal Optical Computer, Higher Colleges of Technology, UAE, July 2011, 6. A. K. Mazher, A Review of Uranium Economics, International Journal of Nuclear Governance, Economy and Ecology (IJNGEE), Volume 2 - Issue 4, pp. 337-361, 2009. 7. A. K. Mazher, Education and Curriculum Development for the Next Generation of Entrepreneurs, Proceeding of Entrepreneurs in the Shade of Global Trade, the First Entrepreneurial Forum in the Gulf States, King AbdulAziz University , Jeddah, Saudi Arabia from 2-4 November, 2009.