



The University of Texas at Tyler
College of Engineering and Computer Science
Faculty Biographical Sketches

FREDERICKA BROWN, PH.D., M.B.A.

CURRENT POSITION:

Associate Professor, Department of Mechanical Engineering

BIOGRAPHICAL SKETCH

Dr. Fredericka Brown received a Bachelor of Science degree in Physics from Xavier University in 1996. She received the Master of Science and Doctor of Philosophy degrees in Mechanical Engineering from the University of Nevada, Las Vegas in 1998 and 2003. Dr. Brown also received a Master of Business Administration in 2008 from The University of Texas at Tyler. During her graduate study, Dr. Brown specialized in Fluid/Thermosciences and Aerospace. She is a member of the American Society for Engineering Education and American Society of Mechanical Engineers.

Prior to receiving her Ph.D., Dr. Brown worked as an engineer/scientist in the Waste Package Department of Framatome Cogema Fuels in Las Vegas, Nevada, a systems analyst in the Systems Engineering and Analysis Division of TRW in Las Vegas, Nevada, and also an engineering technician at the U.S. Department of Interior in Boulder City, Nevada. After receiving her Ph.D., Dr. Brown joined the mechanical engineering faculty at The University of Texas at Tyler as an Assistant Professor.

Dr. Brown's primary technical research interest is numerical modeling and simulation of thermal/fluid transport phenomena in physiological and engineered systems. She has applied her expertise in numerical modeling and simulation to analyze the efficiency of parabolic solar trough collectors used for domestic heating applications, thermal comfort and energy demands, and thermal transport phenomena in skin.

She has authored many technical papers that have been presented in national and international forums. She has served on the technical program committees of several international conferences and workshops, and served as a reviewer for NSF and several journals. Dr. Brown has also expanded her research focus to include engineering education and increasing the number of students in the pipeline through P-16 initiatives.



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RESEARCH INTERESTS

Dr. Brown has research interests in the following areas:

- Engineering Education
- Thermal/Fluid Transport Phenomena in Physiological and Engineered Systems
- Energy Sustainability

CONTACT INFORMATION

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