



## Mohammad Abu Rafe Biswas

### Assistant Professor

#### Biographical Sketch:

Dr. M. A. Rafe Biswas is a NASA JSC Faculty Research Associate Engineer through a cooperative agreement. His expertise and interest include thermal fluid science, control theory, process and system dynamics, fuel cell systems, and engineering education. He is a co-inventor of a patent on control architecture for direct methanol fuel cell systems. He has also co-authored several journal and conference publications on various topics including fuel cells, thermal management, software verification, and residential building energy modeling. He is a member of ASME. Dr. Biswas received a Doctor of Philosophy in Chemical Engineering from the University of Florida and a Bachelor of Chemical Engineering from Auburn University. He came on as an adjunct faculty in Fall 2013 prior to joining full time in January 2014. More about his work can be found at: <https://works.bepress.com/mohammad-biswas/>

#### Research Interest:

Dr. Biswas has research interests in the areas of process dynamics and control, fuel cell systems and engineering education. His current projects include dynamic thermal fluid model development of a regenerative fuel cell system to optimize the power and thermal performance for a wide operating range for deep space missions in cooperation with NASA JSC Energy Conversion System Branch, as well as of a ceramic transport membrane system for high-purity oxygen production in applications of space flight and global health in collaboration with NASA JSC Crew and Thermal System Division and Texas Space Grant Consortium. Dr. Biswas is also working collaboratively with his colleagues on the design and construction of a laboratory scale, interchangeable heat exchanger system to be accessible physically and online to students from multiple courses for integrative learning

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