

Billy Hughes Jr.

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EDUCATION: Bachelors of Science in Mechanical Engineering, December 2015. *University of Central Florida, Orlando*

PROFESSIONAL INTERESTS: Obtain an internship leading to a professional career after graduation

PROFESSIONAL EXPERIENCE:

[1] **NSF I-Cubed STEM Fellow, University of Central Florida** *August 2014 – Present*

- Conducted and Analyzed Raman spectroscopy experiments for hypersonic vehicle ceramics
- Communicated ceramic research to graphic design students for artwork collaboration
- Participated in outreach events to educate community on STEM research

[2] **Research assistant, University of Central Florida** *January 2013 – June 2014*

- Designed a 2 stage combustion inlet for combustion in porous media
- Collected and Analyzed combustion system data
- Listed, ordered, and specified combustion engine components for manufacturing development
- Assembled and conducted combustion experiments

[3] **COMPASS Mentor, University of Central Florida** *August 2013-December 2013*

- Mentored freshman engineering students in a group and individually
- Facilitated learning and growth for future engineers
- Completed assessments and progress reports for each student

PUBLICATIONS/PRESENTATIONS

[1] Robayo, M., Beaman, B., Hughes, B., Delose, B., Orlovskaya, N., Chen, R.-H., Perovskite catalysts enhanced combustion porous media, *Invention Disclosure*, October 29, 2013

[2] Robayo, M. D., Beaman, B., Hughes, B., Delose, B., Orlovskaya, N., & Chen, R. H. (2014). Perovskite catalysts enhanced combustion on porous media. *Energy*.

[3] Hughes B., Terracciano A., Beaman B., Robayo M., Orlovskaya N. (February 2014), *Syngas Combustion in Porous Media: Creation of an Experimental Porous Combustor*. Poster Presentation presented at the Materials Challenges in Alternate & Renewable Energy International Conference, Clearwater, FL

HONORS:

- NSF I-Cubed STEM Fellow
- Progress Energy Undergraduate Research Grant
- Florida Bright Futures Medallion Scholarship
- National Society of Leadership

PROFESSIONAL ORGANIZATIONS:

- Member of American Ceramic Society (ACerS)
- Member of Association of Iron and Steel Technology (AIST)
- Member of American Society of Metals International (ASM)
- Member of Minerals, Metals, and Materials Society (TMS)

ACTIVITIES:

- UCF Baptist Collegiate Ministry Leadership Team *Fall 2013 - Present*
- UCF Bowling League, Team Anchor *Fall 2011 – Spring 2012*

SKILLS

- Proficient in AutoCAD, NX, COMSOL Multiphysics, Mathcad, Matlab, Labview, MS Office, Outlook, Raman Spectroscopy under normal and cryogenic conditions.

Advisor: Dr. Nina Orlovskaya, Assistant Professor in MMAE at UCF, Nina.Orlovskaya@ucf.edu