

Education

- August 2020 (Expected) **Ph.D. Mechanical Engineering, Georgia Institute of Technology**, GPA 3.91
 Thesis: *Evolution and Control of Coupled Flow Separation and Streamwise Vorticity Concentrations within Offset Diffusers*
 Advisor: Dr. Ari Glezer
 Minor: Computational Science and Engineering
- Dec 2018 **M.S. Mechanical Engineering, Georgia Institute of Technology**, GPA 4.00
- May 2014 **B.S. Mechanical Engineering, North Carolina State University**, GPA 3.63

Research Experience

- Aug 2014 **Graduate Research Assistant**
 - Aug 2020
- Manage and operate a transonic wind tunnel facility, and conduct experiments
 - Design flow control devices to modify serpentine diffuser internal flow structure for improvement of aircraft engine performance
 - Design components, systems, and software for customized measurement techniques
 - Perform data processing, visualization, and analysis
 - Present research at conferences and produce conference and journal papers

Technical Skills

- Software* LabView, Siemens NX, MATLAB, Linux
- Programming* C, C++, Python, MPI, GPU, OpenMP, Pandas, Javascript
- Laboratory* Particle image velocimetry, pressure-sensitive paint, experimental flow visualization, measurement and signal processing, experimental design, laser and camera optics
- Interests* Thermo-fluidic sciences, data science, computational fluid dynamics, numerical methods, high performance computing

Journal Publications

- Feb 2019 **Control of flow distortion in offset diffusers using trapped vorticity**
 Travis J. Burrows, Bojan Vukasinovic, Matthew T. Lakebrink, Mortaza Mani, and Ari Glezer
 International Journal of Heat and Fluid Flow, Volume 75, 2019

Conference Publications

- Jun 2020 **Controlled Flow Dynamics in a Serpentine Diffuser with a Cowl Inlet**
 Travis J. Burrows, Bojan Vukasinovic, Ari Glezer, Matthew T. Lakebrink, and Mortaza Mani
 AIAA Aviation 2020 Forum
- Jun 2019 **Control of a Transonic Shock in a Serpentine Diffuser using Surface Fluidic Actuation**
 Travis J. Burrows, Bojan Vukasinovic, and Ari Glezer
 AIAA Aviation 2019 Forum
- Jun 2018 **Flow Dynamics Effected by Active Flow Control in an Offset Diffuser**
 Travis J. Burrows, Bojan Vukasinovic, and Ari Glezer
 2018 Flow Control Conference, AIAA AVIATION Forum
- Jun 2017 **Fluidic Control of an Aggressive Offset Diffuser for a Supersonic Inlet**
 Travis J. Burrows, Bojan Vukasinovic, and Ari Glezer
 47th AIAA Fluid Dynamics Conference, AIAA AVIATION Forum

- Jan 2017 **Experimental and Numerical Investigation of Controlled Flow Distortion in a Subsonic Offset Diffuser by Trapped Vorticity**
Bojan Vukasinovic, Travis J. Burrows, Ari Glezer, Matthew T. Lakebrink, and Mortaza Mani.
55th AIAA Aerospace Sciences Meeting, AIAA SciTech Forum
- Jan 2016 **Investigation of Trapped Vorticity Concentrations Effected by Hybrid Actuation in an Offset Diffuser**
Travis J. Burrows, Zicheng Gong, Bojan Vukasinovic, and Ari Glezer
54th AIAA Aerospace Sciences Meeting, AIAA SciTech Forum

Work Experience

- Jan 2012 **Development and Manufacturing Engineering Co-ops, Robert Bosch, LLC.**
- Dec 2013
- Stress-tested prototype components, analyzed results, and presented findings
 - Statistically analyzed production line to determine process and machine capability