

# Tyler VAN BUREN

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## EDUCATION

### Rensselaer Poly. Inst. (RPI)

**Ph.D.** in Aeronautical Eng. *May 2013*

**M.S.** in Aeronautical Eng. *May 2010*

**B.S.** in Aero. and Mech. Eng. *May 2008*

### Princeton University

Visiting Scholar *Spring 2013*

## CORE SKILLS

Project management • Research • Fluid mechanics • Aerodynamics • Hydrodynamics • Experiments • Simulation

## TECH. COMMUNICATIONS

Journal publications: 43

Book chapter: 1

Invited seminars: 12

Conference presentations: 38

## TEACHING/ADVISING

Avg. rating: 4.93 (118 student responses)

Taught students: 300

Courses: Fluids 2, Aerodynamics, Senior Design, Independent Study

Advised students: 2 grad, 15 undergrad

## AWARDS

ONR Summer Faculty Fellow (2020)

Boeing Supplier of the Year Award (2011)

Boeing Performance Excellence Award (2010 and 2011)

Rensselaer Medal Scholarship (2004-2008)

Deans List (2005-2008)

## OUTREACH

**ELC Window Science** - COVID-safe science activities through a window at the Early Learning Center (pre-k)

**PU Committee on Climate and Inclusion** (founding member) - making MAE a more inclusive environment

**PU Eng. Labs Demos** (lead organizer) - annual event for attracting young minds to STEM

## MEMBERSHIPS/SERVICE

Member: AIAA, APS, ASME, SES

Advisory Committee: TSFP (2017,2019)

Chair: APS (2016); TSFP (2017)

Reviewer: JFM, PRF, POF, EXIF, AIAA, ...

Dept. Committee: grad. adm., grad. curr.

## EXPERIENCE

### Assistant Professor | University of Delaware

AUG '19 – PRESENT

- Lead a research group of graduate and undergraduate students specializing in Fluid Mechanics and Aero/Hydrodynamics.
- Generate funding for sustained research activity from government agencies, industry, and private sources.
- Design and instruct undergraduate and graduate courses in Mechanical Engineering.
- Serve on professional committees and chair & organize conferences.

### Research Scholar | Princeton University

JUL '18 – AUG '19

- Lead independent research programs in unsteady aerodynamics, turbulence, and flow control.
- Prepared grant proposals to maintain an active research program.
- Mentored and trained 6 graduate students, 19 undergraduate students, and 9 visiting scholars.

### Professional Specialist | Princeton University

AUG '15 – JUN '18

- Directed research initiatives, designed test facilities, conducted data analysis, and regularly presented progress through technical communication.
- Generated over \$260,000 for multiple years of research through government, industry, and private funding sources.
- Managed laboratory logistics which included group organization, safety training, and inspection/maintenance schedules.

### Postdoctoral Researcher | Princeton University

JAN '14 – JUL '15

- Lead researcher and manager on multiple projects including two Navy (ONR) sponsored multi-university efforts.
- Developed and implemented novel fluid measurement systems to meet unique project needs.
- Collaborated with researchers from other schools to accomplish synergistic multidisciplinary research.

### Lecturer | Rensselaer Poly. Inst.

AUG – DEC '13

- Prepared, instructed, and graded two engineering courses: Introduction to Engineering Design (IED); Fluid Dynamics Laboratory (FDL).
- Instructed small teams and large lectures (300+ students).
- Taught valuable professional skills like teamwork, project design, data analysis, oral presentation, and technical writing.

### Postdoctoral Researcher | Rensselaer Poly. Inst.

JUN – AUG '13

- Designed and patented a flow control device to enable better aircraft performance through surface modulation.
- Attracted the Northrop Grumman Corporation as a partner and funding agency leading to multiple years of academic research.

### Grad. Research Assistant | Rensselaer Poly. Inst.

AUG '08 – MAY '13

- Studied flow control technologies applied to various flow field types through experimental, computational, and theoretical modeling.
- Developed devices to be used by the Boeing Company and the Air Force in an effort to reduce costs and increase performance of their aircraft.