Current Address:
1111 Preston Ave, Apt 3C
Charlottesville, VA 22903

AYODEJI BODE-OKE

atbodeoke.com

LinkedIn: Ayodeji Bode-Oke
Email: atb5dc@virginia.edu
Cell: (434) 218-8639

PROFESSIONAL SUMMARY

- Forward-thinking aerospace engineer with a strong background in unsteady aero/hydrodynamics and bio-inspired engineering leading to successful completion of a doctorate in a hybrid of both fields.
- Excellent team player and strong builder of prolific collaborations as evidenced by 10 co-authored publications.
- Self-motivated individual with easy-integration in a multicultural environment with proven ability to work under pressure to high levels of accuracy and quality in a fast-paced work environment.

EDUCATION

University of Virginia, Charlottesville, VA.

Ph.D. in Aerospace and Mechanical Engineering. GPA: 3.920	Expected, May 2019
M.S. in Aerospace and Mechanical Engineering. GPA: 3.920	May 2017
B.S. in Aerospace Engineering, *highest distinction*. GPA: 3.845	May 2015

SKILLS

Unsteady fluid mechanics, vortex dynamics, bio-inspired engineering, computational fluid dynamics (CFD), mathematical modeling, scientific programming, concept development, project management, oral and written communication, strong leadership, interpersonal and collaborative skills.

TOOLBOX

FORTRAN, MATLAB, Tecplot, Unix/Bash, Mathematica, Autodesk Inventor, Maya, Solidworks (CAD), Python, Adobe Creative Suite, Visual Studio, Microsoft Office, ANSYS Fluent, high-speed cameras.

LANGUAGES

Fluent in **English** and **Yoruba.**

RELEVANT EXPERIENCE

University of Virginia, Charlottesville, VA. *Graduate Researcher*, 2015-2019

- Investigated the unsteady aerodynamics of nature's fliers and swimmers for unmanned aerial/underwater vehicle (UAV/drone) design.
- Designed free flight experiments and performed flight simulations using in-house CFD codes.
- Developed codes for streamlining workflow from data collection to analysis to publication.
- Discovered a new flight mode for additional maneuverability of flapping-wing flight and unraveled the techniques of force generation, use of aerodynamic mechanisms, and wing and body function.
- Collaborated with diverse teams as part of ONR's multi-university initiative on fast/efficient swimming.
- Authored 10 publications and 13 professional presentations at conferences and grant review meetings.
- Mentored and managed 5 independent study projects by undergraduate and high-school students.

University of Virginia, Charlottesville VA. *Teaching Assistant*, 2017-2018

- Facilitated the learning of over 300 students through office hours and review sessions in Partial Differential Equations (Fall '17), Probability & Statistics (Spring '18), and Fluid Mechanics (Fall '18).

University of Virginia, Charlottesville VA. *Undergraduate Researcher*, 2013-2015

- Investigated the airframe morphing of flying insects using high-speed cameras and 3D reconstructions.
- Developed codes for kinematics quantification, rigid-body dynamics and single-objective optimization.
- Presented findings in 1 publication and 2 presentations at conferences.

Technische Universität Braunschweig, Braunschweig, Germany. Summer 2014.
- Collaborated with a team of 19 students to design new concepts for the future of transportation.
- Proposed a semi-autonomous electric bike mobility extender that interfaced with existing infrastructure.
- Presented design at Volkswagen headquarters.

RELEVANT PROJECTS

Electric Aircraft Design, 2014-2015
- Designed a four-place general aviation electric aircraft with distributed propulsion for operation in 2020.
- Conceptualized the bio-inspired design concept and performed necessary aerodynamic calculations, presenting ideas in a state-of-the-art report and thesis.

Spacecraft Design, 2014-2015
- Developed mission concepts and grant proposal to estimate the erosion and pollution in the Chesapeake Bay using a low-orbit cube 3U CubeSat.
- Planned the communication strategy from the CubeSat in space to the ground station on earth.

Technology and Society, 2014-2015
- Elucidated the impacts and implications of technological leapfrogging in sub-Saharan Africa countries in relation to the adoption of complex technologies from the first world (e.g., electric vehicles).

LEADERSHIP EXPERIENCE

American Institute of Aeronautics and Astronautics Student Conference, 2017
- Chaired a session of undergraduate student presentations on various topics in aerospace engineering.

Office of African American Affairs Peer Advisor Program, 2014-2015
- Coordinated a weekly program that offered both course-specific help and life skills colloquia to boost performance for first-year African-American college students.
- Managed 30 tutors and coordinated contact with colloquia speakers

Sigma Gamma Tau- National Aerospace Honor Society, 2014-2015
- Served as vice president of the University of Virginia chapter.
- Recruited new inductees, coordinated tutoring sessions, and collaborated with the faculty advisor.

Aerospace and Mechanical Engineering, 2014-2015
- Coordinated groups of 15 students on projects in air-breathing prolusion and aircraft design.
- Fine-tuned group dynamics and conflict resolution and delegation skills as a result.

HONORS

American Institute of Aeronautics and Astronautics (AIAA), **Abe Zarem award for distinguished achievement in aeronautics,** 2015
University of Virginia Engineering Research Symposium (UVERS), **First Place**, 2016
University of Virginia Aerospace and Mechanical Engineering, **Outstanding Graduate Student**, 2016
American Institute of Aeronautics and Astronautics (AIAA), **Member Spotlight – September 2015,** 2015
AIAA Region I Student conference, **Second Place – Master's Category,** 2015
University of Virginia Aerospace and Mechanical Engineering, **Research Presentation Award**, 2018
University of Virginia Black Student Alliance, **Silent Inspiration Award**, 2015

RELEVANT COURSEWORK

Fluid mechanics, Computational Fluid Dynamics, Flight vehicle dynamics, Thermomechanics
Analytical dynamics, Multibody mechanical systems, Aircraft design, Finite Element Analysis.