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

AYODEJI BODE-OKE

atbodeoke.com

LinkedIn: Ayodeji Bode-Oke
Email: atbodeoke@gmail.com
Cell: (434) 218-8639

PROFESSIONAL SUMMARY

- Forward-thinking aerospace engineer with a strong background in fluid dynamics using experiments and computational fluid dynamics to investigate low reynolds number bio-inspired propulsion.
- Excellent team player and strong builder of prolific collaborations as evidenced by 11 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 Mechanical and Aerospace Engineering. GPA: 3.920	August 2019
M.S. in Mechanical and Engineering. GPA: 3.920	May 2017
B.S. in Aerospace Engineering, *highest distinction*. GPA: 3.845	May 2015

SKILLS

Aerodynamics, computational fluid dynamics (CFD), physics-based modeling, scientific programming, project management, experimental design, research, 3D modeling and prototyping, idea generation, oral and written communication, strong leadership, interpersonal and collaborative skills.

TOOLBOX

FORTRAN, MATLAB, CFD research codes, Tecplot, Maya, Solidworks, Adobe Creative Suite, Python, Bash, C++.

RELEVANT COURSEWORK

Computational fluid dynamics, fluid mechanics, thermomechanics, computation as a research tool, aerodynamics, heat and mass transfer, flight vehicle dynamics.

LANGUAGES

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

RELEVANT EXPERIENCE

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

- Investigated the unsteady aerodynamics and bio-physics of nature's fliers and swimmers for unmanned aerial/underwater vehicle design.
- Leveraged CAD tools for reconstructing dynamic motions and deformation of natural propulsors.
- Designed free flight experiments and performed numerical 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 11 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. *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.

CAPSTONE 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.
- Designed 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, conflict resolution, and delegation skills as a result.

ADDITIONAL EXPERIENCE

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).

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

HONORS

American Institute of Aeronautics and Astronautics (AIAA), **Abe Zarem award for distinguished achievement in aeronautics,** 2015
University of Virginia Aerospace and Mechanical Engineering, **John E. Scott award for research excellence in fluid related areas**, 2019
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