

VICTORIA CHIBUOGU NNEJI

Box 90300, Durham, NC 27708 | vnneji2@gmail.com

EDUCATION

DUKE UNIVERSITY

Durham, NC

Doctor of Philosophy, Mechanical Engineering (Robotics)

2015 – 2019 (expected)

- Dissertation: *A Human-Systems Performance Model for Designing Autonomous Vehicle Network Operations*
- Advisor: Dr. Mary (Missy) Cummings

DUKE UNIVERSITY

Durham, NC

Master of Engineering Management

2014 – 2015

- Focus: Autonomous Systems Engineering

COLUMBIA UNIVERSITY

New York, NY

Bachelor of Science, Applied Mathematics

2010 – 2014

- Minor: Entrepreneurship & Innovation

RESEARCH & TECHNOLOGY EXPERIENCE

DUKE UNIV. HUMANS & AUTONOMY LAB

Durham, NC

Graduate Research Fellow

2015 – present

- Invent methods for rapidly prototyping remote management of autonomous vehicle (AV), air and rail fleets.
- Lead 2 teams of 10 assistants on research sponsored by the US Dept of Transportation and NASA Langley.
- Consult with executives from commercial airlines, railroads, logistics and manufacturing companies.

AURORA FLIGHT SCIENCES, A BOEING COMPANY

Cambridge, MA

Research & Technology Innovation Strategist

Summer 2018

- Consulted with leaders of strategic programs, innovation, robotics, and advanced vehicles.
- Developed strategy for aerospace autonomy growth initiatives partnering with MIT and other universities.

GENERAL MOTORS CO.

Warren, MI

Design Research Engineer

Summer 2017

- Conducted advanced technical work with senior human factors engineers focused on driver performance, crash avoidance, and automated vehicle research.

STANFORD UNIV. SCHOOL OF ENGINEERING

Stanford, CA

Design Research Fellow

2015

- Led 60+ human-robot interaction between-subject experiments with sample of teens to test response to innovative artificially emotionally intelligent robot user interface designs.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Research Triangle Park, NC

Systems Design Engineer

2014 – 2015

- Prototyped support tool to improve accuracy in data entry by 90% and bring down analyst workload by 60%.

TO.BE

New York, NY

User Experience and Business Intelligence Researcher

Summer 2013

- Introduced quantitative methods to inform user interface design engineering and commercialization paths.

SHODOR EDUCATION FOUNDATION

Durham, NC

Advanced Computational Science Apprentice and Intern

2005 – 2008

- Developed systems dynamics and agent-based simulation models and designed software for local business.

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TEACHING EXPERIENCE

DUKE UNIV. SANFORD SCHOOL OF PUBLIC POLICY

Durham, NC

Teaching Assistant: Visualizing Social Mobility in the Developing World

Spring 2018

- Led lectures on user experience research, prototyping, usability for 15 students.
- Promoted student self-confidence by equipping with design thinking tools for data visualization.

DUKE UNIV. PRATT SCHOOL OF ENGINEERING

Durham, NC

Teaching Assistant: Distributed Robotics Systems

Fall 2017

- Mentored 30 electrical and mechanical engineering student projects on robot algorithms.

Teaching Assistant: Introduction to Systems Engineering

Fall 2015 & Fall 2016

- Led lectures on simulation, software and product lifecycle management for 30 students/term.
- Mentored mechanical engineering, management students' projects for BD Technologies, NASA.

PEER-REVIEWED PUBLICATIONS

- Nneji, V. C., Cummings, M. L., & A. Stimpson. (in revision). Predicting Locomotive Crew Performance in Rail Operations with Human and Automation Assistance. In *IEEE Journal of Human-Machine Systems*.
- Nneji, V. C. & M.L. Cummings. (in review). A Systems-Theoretic Computational Model of Human Performance in Advanced Railroad Dispatch Operations. In *U.S. Department of Transportation tech reports*.
- Nneji, V.C. & M.L. Cummings. (accepted). Toward Level 5: What Autonomous Vehicle Companies Can Learn from Railroad and Airline Operations. In *Transportation Research Board*.
- Huang, L., Nneji, V.C. & M.L. Cummings. (accepted). How Airline Dispatchers Manage Flights: A Task Analysis in Distributed and Heterogeneous Network Operations. In *AIAA Infotech@SciTech Conference*.
- Huang, L., Cummings, M.L., & V.C. Nneji. (2018, Oct). Preliminary Analysis and Simulation of Railroad Dispatcher Workload. In *Human Factors & Ergonomics Society 62nd International Annual Meeting*.
 - Best Paper Award | Human Performance Modeling Technical Group
- Nneji, V. C., Cummings, M. L., Stimpson, A., & K.H. Goodrich. (2018, Jan). Functional Requirements for Remotely Managing Fleets of Personal On-Demand Aircraft. In *AIAA Infotech@SciTech Conference*.
- Nneji, V. C., Stimpson, A., Cummings, M. L., & K.H. Goodrich. (2017, Jun). Exploring Concepts of Operations for On-Demand Passenger Air Transportation. In *AIAA Aviation Technology, Integration, Operations Conf*.
- Martelaro, N., Nneji, V. C., Ju, W., & P. Hinds. (2016, Mar). Tell me more: Designing HRI to encourage more trust, disclosure, and companionship. In *ACM/IEEE International Conference on Human Robot Interaction*.

GRANTS AWARDED

- \$1.0K Duke University Department of Mechanical Engineering Travel Grant 2018
- \$525 Duke University Graduate School Travel Grant 2018
- \$1.0K Lifesavers Conference on Highway Safety Priorities Traffic Safety Scholarship 2017
- \$8.6K Stanford University School of Engineering Graduate Summer Research Grant 2015
- \$85K Duke University Department of Mechanical Engineering Fellowship 2015
- \$6.5K Duke University Science & Society Initiative Bioethics & Science Policy Scholarship 2014
- \$400 Duke University Master of Engineering Management Program Travel Grant 2014
- \$500 Anita Borg Institute Systers Pass It On Award for Social Entrepreneurial Venture 2011
- \$1.1M in Scholarships from Google, Coca-Cola, Bill & Melinda Gates, etc. 2010

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SERVICE & ACTIVITIES

PROFESSIONAL

- Board of Trustees, American Institute of Aeronautics & Astronautics (AIAA) 2018 – present
- Member, Institute for Operations Research & Management Sciences (INFORMS) 2018 – present
- Member, AIAA 2017 – present
- Member, Human Factors & Ergonomics Society (HFES) 2016 – present
- Member, Institute of Electrical & Electronics Engineers (IEEE) 2016 – present
- Reviewer, Transportation Research Board 2016 – present
- Speaker, Intelligent Transportation Systems, Volpe National Transportation Center, Cambridge, MA 2018
- Speaker, Emergent Aircraft Systems & the Dispatcher, NASA Ames, Mountain View, CA 2018
- Speaker, Rio Grande Pacific Company, Fort Worth, TX 2018
- Speaker, UPS Atlantic Operations, New York, NY 2017
- Speaker, Southwest Airlines, Dallas, TX 2017
- Speaker, American Airlines, Dallas, TX 2017
- Presenter, General Motors Co. Exposition, Detroit, MI 2017
- Speaker, General Electric Global Research Center, Niskayuna, NY 2015
- Fellow, College Code Camp, Square, San Francisco, CA 2014
- Fellow, FUSE Android App Development, Google, New York, NY 2011
- Fellow, Computer Science Summer Institute, Google, Mountain View, CA 2010

ACADEMIC

- Speaker, Duke Innovation & Entrepreneurship, US Department of Defense MD5 Initiative 2018
- Presenter, Stanford-MIT-CU Boulder Women in Aerospace Symposium 2018
- Speaker, Maryland Robotics Center and Institute for Systems Research 2018
- Discussant, Automation & Jobs, Management Strategy Faculty, Fuqua School of Business 2018
- Lecturer, Transportation Statistics, Statistical & Applied Mathematical Sciences Institute (SAMSI) 2017
- Member, Pratt School of Engineering Subcommittee on Graduate Diversity & Inclusion 2016 – 2017
- Speaker, Duke GradX TED-style talks 2016
 - **Best Speaker Award | Duke University Graduate School**
- Honoree, Fu Foundation School of Engineering & Applied Science Dean's List 2014
 - **Featured as 1 of 6 "Great Grads" campus-wide | Columbia University**

COMMUNITY

- Discussant, Automation & Nuclear Stability, Center for New American Security (CNAS), Washington, DC 2018
- Commissioner, City of Durham Dept. of Transportation 2015 – 2018
- Model, AIAA's Careers in Aerospace Magazine 2017
- Model, Google's Expeditions Virtual Reality Poly3D App 2017
- Model, Google's Careers with Code Magazine 2016
- Presenter, Graduate Education Day, NC General Assembly State Legislature 2016
- Delegate, Policy Advocacy, American Association for the Advancement of Science 2015
- Editor-in-Chief & Business Manager, The Columbian Yearbook 2014
- Leader, Hurricane Sandy Disaster Relief Shelter 2012
 - **Community Leadership Award | Columbia University Residential Programs**
- Consultant for Business Development, Kenneth Cole & Northern Manhattan Improvement Corp 2012
- Board of Directors, Community Impact at Columbia University 2011 – 2012