EMAD MASROOR

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Ph.D Candidate, Engineering Mechanics, Virginia Tech

RESEARCH INTERESTS

Fluid mechanics, vortex dynamics, bluff body wakes, fluid-structure interaction

EDUCATION

Virginia Tech, Blacksburg, VA.
Ph.D., Engineering Mechanics, expected Dec. 2022.
Advisor: Mark Stremler.

Cornell University, Ithaca, NY.
B.S., Mechanical Engineering, May 2017.
Advisor: Richard Rand.

PRESENTATIONS

"Classifying Relative Vortex Motions in 2P Mode Wakes" (non-presenting author)
July 2018, 7th conference on bluff body wakes and vortex-induced vibrations — Marsielle, France.

"Vortex Patterns in the 2-dimensional wake behind an oscillating cylinder"
November 2018, Fall Fluid Mechanics Symposium — Blacksburg, VA.

"Wake Structure of an oscillating cylinder in a flowing soap film at low Reynolds number"
November 2018, American Physical Society Division of Fluid Dynamics — Atlanta, GA.

"Vortex patterns in the two-dimensional wake of a transversely oscillating cylinder in uniform flow"
June 2019, International Union of Theoretical and Applied Mechanics Symposium on Vortex dynamics in science, nature and technology — San Diego, CA.

Posters

"The von Kármán street as a dynamical system"
August 2019, São Paulo School of Advanced Sciences on Nonlinear Dynamics — São Paulo, Brazil.

AWARDS

Graduate Research Fellowship, National Science Foundation, 2019-2023.

College of Engineering Fellowship, Virginia Tech, Spring 2018.

The Liviu Librescu Memorial Fellowship, Engineering Mechanics program, Virginia Tech, Spring 2019.

International Student Tuition Scholarship, Cornell University, Fall 2013 to Spring 2017.

TEACHING EXPERIENCE

Instructor

Engineering Problem Solving (gifted middle school level)
Duke University Talent Identification Program, Davidson College, Summer 2018 & Summer 2019

Teaching Assistant

ESM 2074 - Computational Methods, Virginia Tech, Spring 2018.

ESM 3024 - Introduction to Fluid Mechanics, Virginia Tech, Fall 2018.

ESM 2304 - Dynamics, Virginia Tech, Spring 2019.

Lectures

Delivered a guest lecture on point vortex dynamics for a senior level class on nonlinear dynamics and chaos, March 2019.

SYMPOSIA AND SCHOOLS ATTENDED

São Paulo School of Advanced Sciences on Nonlinear Dynamics
Escola Politécnica da Unviersidade de São Paulo (USP), Brazil, July-August 2019.

Ph.D Course on Vorticity, vortical flows, and vortex-induced vibrations
Danmarks Tekniske Universitet (DTU), Lyngby, Denmark, August 2019.

PROFESSIONAL SOCIETIES

American Physical Society

Society for Industrial and Applied Mathematics