

Notes:



2017 Graduate Student/
Post-Doctoral Symposium

The Burgers Program for
FLUID DYNAMICS



Burgers Program for Fluid Dynamics/
University of Maryland, College Park



JOHNS HOPKINS
Center for Environmental
& Applied Fluid Mechanics

Center for Environmental and
Applied Fluid Mechanics/
Johns Hopkins University

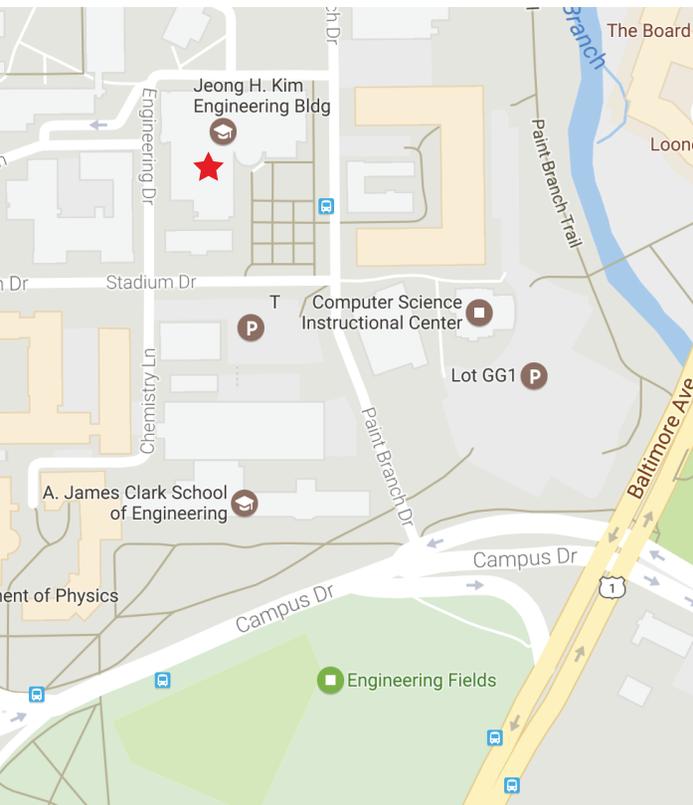


THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF ENGINEERING
AND APPLIED SCIENCE

Department of Mechanical & Aero-
space Engineering/
George Washington University

Friday May 26, 2017
Kay Boardroom of the Jeong H. Kim
Building (Rooms 1107 & 1111)
University of Maryland, College Park
College Park, MD 20742

Burgers Program for Fluid Dynamics
Room 4211 Atlantic Building
University of Maryland, College Park
College Park, MD 20742



Symposium Schedule

8:30 - 9 a.m. Breakfast

9 - 9:05 a.m. Welcome - Prof. James M. Wallace [UMD]

9:05 - 9:50 a.m. Keynote Lecture: Prof. Thomas Haine [JHU], "Denmark Strait overflow"

Technical Session I
Session Chair: Siavash Toosi

9:50 - 10:10 a.m. Andre Matthieu [GWU], "In-situ velocimetry: Shedding new light onto accident scenarios in high temperature gas cooled nuclear reactors" (Phillipe Bardet)

10:10 - 10:30 a.m. Kookjin Lee [UMD], "Rank-reduction scheme for stochastic partial differential equations" (Howard Elman)

10:30 - 10:50 a.m. Tse-Chun Chen [UMD], "Proactive quality control of atmospheric observations" (Eugenia Kalnay)

10:50 - 11:05 a.m. Coffee break

Technical Session II, Chair: Guang Chen

11:05 - 11:25 a.m. Perry Johnson [JHU], "Intermittency in small-scale turbulence: A velocity gradient approach" (Charles Meneveau)

11:25 - 11:45 a.m. Joel Bretheim [JHU], "Simulations of the restricted nonlinear model of wall-turbulence" (Dennice Gayme and Charles Meneveau)

11:45 a.m. - 12:05 p.m. Shuyue Lai [UMD], "Effect of particle sizes in dust dispersion produced by a shock wave" (Elaine Oran)

12:05 - 12:25 p.m. Junho Park [JHU], "Sensitivity analysis in a high-speed boundary layer" (Tamer Zaki)

12:25 - 12:45 p.m. Yuanchao Li [JHU], "Measurements and characterization of turbulence in the tip region of an axial compressor rotor" (Joseph Katz)

12:45 - 1:40 p.m. Lunch break

Technical Session III, Chair: Kriti Bhargava

1:40 - 2 p.m. Abdollah Koolivand [UMD], "Hydrodynamics and moduli determination of elastic capsules in microfluidic channels" (Panagiotis Dimitrakopoulos)

2 - 2:20 p.m. Chi Zhu [JHU], "Computational modeling of the flow and murmurs associated with an aortic valve stenosis" (Rajat Mittal)

2:20 - 2:40 p.m. Kaushik Sampath [JHU], "Optimized echo PIV-PTV methods applied on routine in-vivo contrast ultrasound images characterizing flow in live thrombus patients" (Joseph Katz)

2:40 - 3 p.m. Nima Mobadersany [GWU], "Jet formation from coated microbubbles for sonoporation and drug delivery" (Kausik Sarkar)

3 - 3:15 p.m. Afternoon break

Technical Session IV, Chair: William Miller

3:15 - 3:35 p.m. Jingling Yang [GWU], "An adaptive mesh refinement flux reconstruction method for magneto-hydrodynamics" (Chunlei Liang)

3:35 - 3:55 p.m. Simon Clement [GWU], "Velocity field history of a buoyant jet in a linearly stratified environment" (Philippe Bardet)

3:55 - 4:15 p.m. Akash Dhruv [GWU], "Direct numerical simulations of boiling in micro-gravity conditions" (Elias Balaras)

4:15 - 4:35 p.m. Ali Tohidi [UMD], "Modeling the generation and transport of firebrands in wildfires" (Michael Gollner)

4:35 - 4:55 p.m. Cong Zhang [UMD], "Field-scale validation of a data-driven wildland fire spread forecast model" (Arnaud Trouvé)

4:55 - 5:14 p.m. Aditya Kulkarni [GWU], "The static performance of a sea lion foreflipper" (Megan Leftwich)

5:15 - 6:15 p.m. Closing reception

(faculty advisors indicated in parenthesis)