Applied Physics Research at NASA Ames Research Center: Two examples

Michael Khasin

Thursday, February 8th
11:10 am - Noon
Building 53 Room 215

Applied Physics Group at NASA Ames Research Center works on variety of topics, ranging from thermal dynamics of cryogenic propellants to physics of 3D printing to Li ion battery modeling. In this talk I will present two problems we have been tackling recently: i) how to measure the remaining amount of propellant in a rocket tank in the absence of gravity; ii) what are the efficiency and the side effects of water suppression of pressure waves created by the rocket exhaust during the launch. The two problems involve very different physics and research tools and the presentation should hopefully be interesting and accessible to both the students and the faculty. The presentation is informal and questions are very welcome during the talk.

References:

Bio information
Dr. Michael Khasin holds M.Sc. in nonlinear physics and PhD in chemical physics from the Hebrew University of Jerusalem. As a postdoctoral researcher at Michigan State University, Massachusetts Institute of Technology, and University of Michigan, Dr. Khasin worked on the theory of non-equilibrium systems and their control and transport in disordered system. Senior Researcher in the Applied Physics Group at NASA Ames Research Center (2012-present, Deputy Lead 2015-present), Awardee of the prestigious 2016 NASA Group Achievement Award. Referee for Phys. Rev. E and Phys. Rev. Letters, Member of AIAA, APS and SIAM. Expertise includes nonlinear and stochastic dynamics, large fluctuations and their control in non-equilibrium systems, cryogenics.