



**KI-Net:** Kinetic description of emerging challenges  
in multiscale problems of natural sciences

An NSF Research Network in Mathematical Sciences



## Conference Announcement

# Young Researchers Workshop: Multiscale Phenomena: modeling, analysis, and computation

October 27-31, 2014

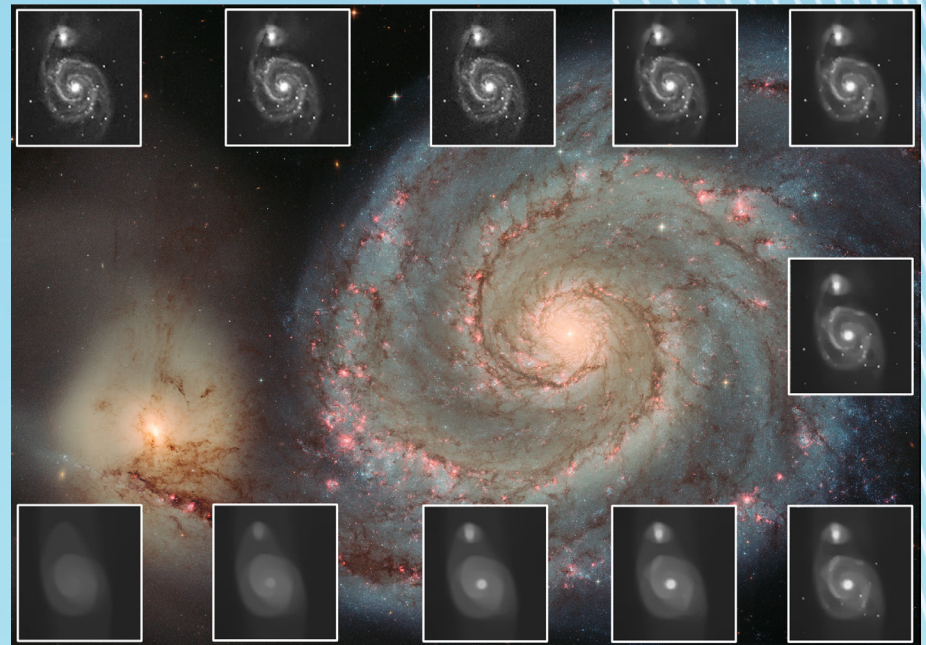
Center for Scientific Computation And Mathematical Modeling  
University of Maryland

### Organizers

**Jacob Bedrossian** University of Maryland  
**Changhui Tan** University of Maryland

### Confirmed Participants

**Jacob Bedrossian** University of Maryland  
**Dana Botesteanu** University of Maryland  
**Juan Calvo** Universitat Pompeu Fabra  
**Young-Pil Choi** Imperial College London  
**Michele Coti Zelati** Indiana University  
**Tarek Elgindi** New York University  
**Ulrik Fjordholm** Norwegian University of Science and Technology  
**Jingwei Hu** The University of Texas at Austin  
**Qin Li** California Institute of Technology  
**Lin Lin** Lawrence Berkeley National Laboratory  
**Lee Ricketson** University of California, Los Angeles  
**Changhui Tan** University of Maryland  
**Ian Tobasco** New York University  
**Magali Tournus** Penn State University  
**Jinhuan Wang** Duke University  
**Li Wang** University of California, Los Angeles  
**Lijiang Wu** Carnegie Mellon University  
**Xiaoqian Xu** University of Wisconsin-Madison  
**Cheng Yu** The University of Texas at Austin  
**Jia Zhao** University of South Carolina  
**Zhennan Zhou** Duke University



Credit: NASA, ESA, S. Beckwith, and the Hubble Heritage Team (STScI/AURA).

### Scientific Background

Multiscale phenomena are ubiquitous in nature but remain notoriously difficult to fully understand. Examples naturally arise in ecology, non-Newtonian fluids, materials science, emergent small-scales in fluid mechanics and kinetic descriptions of complex systems. In order to meet this challenge, new techniques need to be developed that crucially use the interplay between modeling, mathematical analysis and computation.

### Goals

The purpose of this conference is to bring young researchers from across the fields of modeling, analysis and computation together in order to share new ideas and foster interdisciplinary collaborations. The conference will specifically focus on kinetic theory, hydrodynamic models and coupled macroscopic-kinetic systems.

### A limited number of openings are available.

Priority will be given to researchers in the early stages of their career who want to attend the full program, especially for graduate students and post-doctoral fellows. To apply, complete the online application before **August 31, 2014**.

For more information and to apply:  
**[www.ki-net.umd.edu](http://www.ki-net.umd.edu)**



#### KI-NET HUBS

