Tanim Islam

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Objective

Development within the burgeoning field of terascale and utility distributed computing: contribution to utility computing frameworks, client tools, and scientific frameworks leveraged towards distributed computing.

Experience

University of California Santa Cruz UARC
NASA Ames Reseach Center
Moffett Field, CA 94035
Software Engineer III
February 2008 – present

- Development of aircraft simulator for research, behavior congruent to FACET, designed for concurrency and portable to utility computing frameworks.
- Common object model for aircraft weather data reader, built upon Netcdf-Java. Functionality for variety of different scientific data products.
- Significant improvements to Future Advanced Concepts Evaluation Tool (FACET).

University of Virginia
Department of Astronomy
Charlottesville, VA 22903
Teaching Assistant
May 2003-December 2004

- Development of coursework and lectures for introductory and summer astronomy courses, with grading duties. Example course websites located here.
- Tutoring students in astrophysics, mathematics homework.

Education

- University of Virginia
  Ph.D., Astrophyics, GPA: 4.0
  Thesis: Transport And Stability Analysis of Dilute Magnetized Accretion Flows.
- California Institute of Technology
  B. S., Physics, GPA: 3.7
  Thesis: Parity Violation in B → γKππ Decays.

Qualifications

- Proficient in Java, C, C++, Shell, Python.
- Familiarity with Database Programming (SQL language).
- Java based distributed computing frameworks (Hadoop, Google MapReduce), tools (jclouds), and utility computing frameworks (Eucalyptus, Google Gears, Amazon AWS), and Java concurrency.
- C/C++ distributed and GPU programming (MPI/PVM, CUDA).
- Full skillset found in Curriculum Vitae.

Research

- "Dynamics of the Magnetoviscous Instability," Tanim Islam and Steven Balbus, ApJ 633, 328-333 (2005).
- "Analysis of Airspace Tube Structures," Sheth, K. Islam, T., & Kopardekar, P., AIAA Digital Avionic Systems Conference, AIAA, St. Paul, MN, October 2008.
- "Design and Simulation Methodology to Improve the Performance of Airspace Tube Networks," Sridhar, B., Islam, T., and Gupta, G., AIAA Guidance, Navigation, and Control Conference, AIAA, Toronto, ON, Canada, August 2010.

Affiliations

- American Physical Society

References provided upon request