

**Submissions Deadline Extended for the
George Michael Memorial HPC Fellowship Program**

**Program Honors Exceptional PH.D. Students in the Fields of HPC, Networking,
Storage and Analysis**

SEATTLE – June 15, 2011. Submissions are open for the 2011 **George Michael Memorial HPC Fellowship Program**. This program was established by The Association of Computing Machinery (ACM), IEEE Computer Society and SC Conference series. Fellowship recipients receive a stipend of at least \$5,000 (U.S.) for one academic year, plus travel support to attend the SC conference.

Submissions for the 2011 HPC Fellowship are open at: <http://submissions.supercomputing.org>. The deadline for submissions, including all supporting materials, has been extended to **July 14, 2011**. The deadline for recommendation letters is July 21, 2011.

The fellowship seeks to help address the important issue of training the next generation of HPC scientists and engineers. Over the past several years multiple reports, including the High End Computing Revitalization Task Force's "Federal Plan for High-End Computing" and the National Research Council's study, "Getting Up to Speed: The Future of Supercomputing," have noted the need to have a highly trained cadre of HPC scientists and engineers.

The National Research Council's 2005 study, "Getting Up to Speed," specifically recommends, *"While it is important to keep senior professionals in the field [of supercomputing], it is also important to continue to produce next-generation professionals. Funding models that encourage and support the education of the next generation, as well as those that provide the supercomputing infrastructure needed for their education, are necessary. It is also important that students preparing for a career in high-performance computing have confidence that attractive employment opportunities will continue to exist."*

The George Michael HPC Fellowship Program is designed to directly address this recommendation by honoring exceptional Ph.D. students throughout the world with the focus areas of high performance computing, networking, storage and analysis. The HPC Fellowship Program also supports our longstanding commitment to workforce diversity and encourages nominations of women, members of underrepresented groups and all who contribute to diversity.

As defined by the fellowship eligibility guidelines, HPC covers the areas of computational sciences, computational engineering and computer science using the most powerful computers available at a given time.

Applicants must be enrolled in full-time Ph.D. programs at accredited colleges or universities, and they should have completed at least one year of study in their doctoral programs at the time of their nominations. Students must have letters of recommendation by a full-time faculty member at a Ph.D. granting institution. Fellowship recipients will be selected based on:

- their overall potential for research excellence
- the degree to which their technical interests align with those of the HPC community
- their academic progress to date, as evidenced by publications and endorsements from their faculty advisor and department head, as well as a plan of study to enhance HPC-related skills
- demonstration of their anticipated use of HPC resources.

All applicants must meet minimum scholarship requirements at the institutions where they are or will be registered.

Some of the past areas of research that have generated fellowships in areas of hardware research, OS and middle ware software research, algorithmic research and research into science disciplines that exploit HPC resources. Some examples of past awards are:

Student	Short Description or Title	Institution	Advisor	General Areas
Mark Hoemmen	Algorithms - communication-avoiding linear algebra'	University of California at Berkeley	James Demmel	Computer Science - Algorithms
Arpith Jacob	Hardware Architecture – FPGA use that accelerates DNA sequence analysis	Washington University in St. Louis	Jeremy Buhler	Architecture - Genomics
Chao Wang	System Software - Fault tolerance for extreme scale systems	North Carolina State University	Frank Mueller	Computer Science - Storage
Yaniv Erlich	A self optimizing base-caller for next-generation DNA sequencing technologies using HPCC	Cold Spring Harbor Laboratory	Gregory J. Hannon	Applications - Biology
Douglas J Mason	Graphene Nanotube	Harvard University	Eric Heller	Physics/ Applications and Algorithms
Yong Chen	A Hybrid Data Prefetching Architecture for Data Access Efficiency	Illinois Institute of Technology	Xian-He Sun	Systems
Nathan Tallent	Performance Tools for HPF	Rice University	Joe Warren	Computer Science
Abhinav Bhatele	Topology-aware task	University of Illinois –	Sanjay Kale	Computer

	mapping	Urbana/Champaign		Science
Amanda Peters	Multiscale simulation of cardiovascular flows on the IBM Bluegene/P: full heart-circulation system at red-blood cell resolution	Harvard University	Cherry Murray	Applications - Biomedical
Aparna Chandramowliswaran	Autotuning N-body computations using novel parallel programming models	Georgia Institute of Technology	Richard Vuduc	Algorithms

The Fellowship committee also occasionally awards Honorable Mention Awards. Examples are:

Student	Short Description or Title	Institution	Advisor	General Areas
Yong Chen	System Software – Parallel I/O Concurrency	Illinois Institute of Technology	Xian-He Sun	Applications - CFD
Kamesh Madduri	Efficient solutions for large scale graph theory.	Georgia Institute of Technology	David Bader	Computer Science – Algorithms
Daniel Quest	Transcription Networks	University of Nebraska Medical Center	Hesham Ali	Application - Biology
Samer Al Kiswany	Using GPUs to handle very large data	University of British Columbia	Matei Ripeanu	Systems and Storage
Sean M Couch	Using the Flash Code on New Systems for New Insights	The University of Texas at Austin	J. Craig Wheeler	Applications - Astronomy
Mark Silberstein	Genetic linkage analysis	Technion - Israel	Prof. Eli Biham	Applications - Biology
Amanda Peters	Cardiovascular Disease	Harvard University	Cherry Murray	Applications - Biomedical
Matthew R Norman	Harnessing Petascale Computing Resources for Atmospheric Climate Simulation: An Algorithmic	North Carolina State University	Fredrick H M Semazzi	Applications - Climate

	Approach			
Sara Baghsorkhi	<i>A Performance Analyzing Tool for GPU Computing</i>	University of Illinois at Urbana/Champaign	Wen-mei Hwu and William Gropp	Computer Science - Performance

Please send questions to hpc-fellowship-questions@info.supercomputing.org.