WORKSHOP

The Changing Dynamics of Scientific Collaborations (full-day)
Cecillia Aragon, James Howison, Charlotte Lee, and Claudio Silva

We encourage 3- to 4-page position papers on the following topics, especially those with a focus on understanding or supporting changing practices in these areas:

- Collaborative scientific applications concerning data gathering, analysis, sharing, and visualization
- Case studies concerning data gathering, analysis, sharing and visualization
- Socio-technical research on scientific collaborations
- Research on the scientific software ecosystem
- Social networks of scientists
- Repurposing social software for science
- Participatory design and/or rapid prototyping for scientific software
- Distributed data gathering and analysis
- Time-critical scientific applications
- Studies of generational differences in how science is done
- Cross-functional applications and comparisons of a scientific to a non-scientific field
- Science and Innovation policy questions on these issues at science funding bodies and beyond.

The workshop will bring together researchers who study scientific practices and collaboration and designers who propose to deploy new types of collaborative systems. Research in this area is starting to coalesce into a field of inquiry, but we are still trying to build critical mass and to establish a base for our community of researchers studying the many aspects of scientific collaboration. Therefore, the goal of the workshop is to produce a white paper to report on the state of the field and to delineate themes that comprise current challenges.

Cecilia R. Aragon (CRAragon@lbl.gov) has been a Staff Scientist in the Computational Research Division at Lawrence Berkeley National Laboratory since 2005, after earning her PhD in Computer Science from UC Berkeley in 2004. Her current research focuses on scientist-computer interaction, a subfield of human-computer interaction, and she is interested in how social media and new methods of computer-mediated communication are changing scientific practice. She has developed novel visual interfaces for collaborative exploration of very large scientific data sets, and has authored or co-authored over 30 peer-reviewed publications in the areas of computer-supported cooperative work, human-computer interaction, visualization, visual analytics, image processing, machine learning, and astrophysics. She has received many awards for her research, including the Presidential Early Career Award for Scientists and Engineers (PECASE) in 2008 and four Best Paper awards since 2004. She was recently named one of the Top 25 Women of 2009 by Hispanic Business Magazine.

Charlotte P. Lee (cplee@uw.edu) is assistant professor in the Department of Human Centered Design & Engineering and is an Adjunct Assistant Professor, Information School at the University of Washington. Her research is in the fields of Social Informatics, Computer Supported Cooperative Work (CSCW), Design Studies, and Science and Technology Studies. Her work focuses on empirically describing and theorizing the informational practices, artifacts, and collaborative structures of communities of practice working towards a shared goal: collaborative design. Lee is the principal investigator of three NSF-funded projects studying aspects of collaboration in the development of cyber-infrastructure and is on the Editorial Advisory Board of the Journal of Computer Supported Cooperative Work.

Claudio T. Silva (csilva@cs.utah.edu) received the BS degree in mathematics from the Federal University of Ceara, Brazil, in 1990, and the PhD degree in computer science from the State University of New York at Stony Brook in 1996. He is an associate professor of computer science and a faculty member of the Scientific Computing and Imaging (SCI) Institute at the University of Utah. Before joining Utah in 2003, he worked in industry (IBM and AT&T), government (Sandia and LLNL), and academia (Stony Brook and OGI). He coauthored more than 150 technical papers and eight U.S. patents, primarily in visualization, geometric computing, and related areas. He is an active member of the visualization, graphics, and geometric computing research communities, having served on more than 70 program committees. He is co-editor of the Visualization Corner of the IEEE Computing in Science and Engineering. Previously, he was on the editorial board of the IEEE Transactions on Visualization and Computer Graphics. He was papers co-chair for IEEE Visualization conference in 2005 and 2006. He received IBM Faculty Awards in 2005, 2006, and 2007, and best paper awards at IEEE Visualization 2007 and IEEE Shape Modeling International 2008. He is a member of the ACM, Eurographics, and IEEE.

James Howison (jhowison@cs.cmu.edu) is a post-doctoral fellow in the School of Computer Science at Carnegie Mellon University. His research focuses on the organization of distributed collaboration and he is a co-PI on a three-year NSF funded project, awarded in 2009, to examine the socio-technical ecosystem of scientific software developers.   James holds a PhD from the Information School at Syracuse University, awarded in May 2009. His dissertation, which won first runner-up in the 2009 ICIS/ACM SIGMIS dissertation competition and a Syracuse University Graduate School dissertation prize, brought together the study of motivation and organization among community-based Free and Open Source software projects. His publications include articles in IEEE Computer, IEEE Transactions on Professional Communications, Software Process Improvement and Practice as well as Knowledge, Technology and Policy. He has presented at the International Conferences for Information Systems (ICIS) and Software Engineering (ICSE) and the Academy of Management. He was selected as a participant at the ICIS doctoral consortium in 2007 and the NSF-funded workshop on the Science of Socio-technical Systems in 2008. He has been invited to speak at O'Reilly's eTech, OSCON and FOOcamp conferences.