The First Workshop on Software Engineering for Computational Science and Engineering

International Conference on Software Engineering

May 13, 2008
8:45       Welcome

9:00       Session 1 – How Do We Study Scientists
            • Towards an Ecologically Valid Study of Programmer Behavior for Scientific Computing by Halverson, et al.
            • Large, Efficient Table-top Computing by Basili, et al.
            • Information Design of a Search Tool for Bioinformatics, by Umarji and Seaman

10:15      Follow-up and Discussion

10:30      BREAK

11:00      Session 2 – How Scientists Develop Software
            • Models of Scientific Software Development, by Segal
            • Assessing the Quality of Scientific Software, by Kelly and Sanders
            • Some Lessons I Learned Reviewing Scientific Code, by Morris

12:15      Follow-up and Discussion
Schedule

12:00   LUNCH

14:00   Session 3: Improving Scientific Software Development
• **Towards Applying Complexity Metrics to Measure Programmer Productivity in High Performance Computing** by Danis, et al.
• **Software Automation in Scientific Research Organizations** by Vigder et al.

15:15   Follow-up and Discussion

15:30   BREAK

4:00    Break-Out Groups
**Topics to be determined throughout the day**

5:00    Report of Break-Out Groups

5:30    Adjourn
Potential Breakout Questions

- What are current scientists doing to develop software?

- Design a survey for MATLAB users to find out what they actually do (i.e. get some demographics about the desktop scientists as opposed to the HPC scientists)

- What are the similarities/differences between scientists who use HPC machines and those who use desktop machines?

- What about other quality attributes besides performance and correctness?