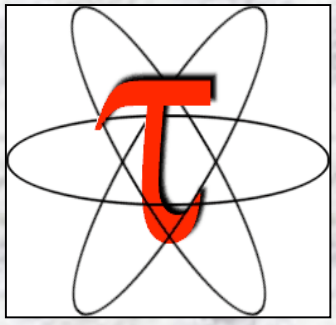
TAU Parallel Performance System

DOD UGC 2004 Tutorial



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Tutorial Schedule

8:30 - 10:00	TAU overview and architecture
10:00 - 10:20	coffee break
10:20 - 11:50	TAU components and usage
11:50 - 1:10	lunch
1:10 - 2:40	TAU applications and developments
2:40 - 3:00	break
3:00 - 4:30	TAU demonstrations
4:30 - 5:00	Q&A

Tutorial Outline – Part 1

TAU Overview and Architecture (1.5 hours)

- Introduction
  - Performance technology
  - Complexity challenges and general problems
- Computation Model for Performance Technology
  - Framework for performance problem solving
- Performance analysis methods
- TAU Performance System
  - Model-oriented framework architecture
  - TAU performance system toolkit
  - TAU features, status, and application

Tutorial Outline – Part 2

TAU Components and Usage (1.5 hours)

- Configuration
- Instrumentation
  - Source, library, dynamic, multi-level
- Measurement
  - Profiling and tracing
- Analysis
  - ParaProf
  - Vampir
- Examples of use

Tutorial Outline – Parts 3 and 4

TAU Applications and Developments (1.5 hours)

TAU Demonstrations (1+ hours)

Tutorial Goals

- Learn about the TAU performance system: measurement API, configuration, and analysis tools
- Understand how TAU is applied in complex parallel computation scenarios
- Develop an appreciation for performance problem solving in complex computational environments
- Consider how TAU may be applied to performance problems of tutorial participants
- Meet tutorial participants and provide opportunity for follow-on interaction

Biographical Sketch - Allen D. Malony

- Education
  - B.S., 1980 University of California, Los Angeles
  - M.S., 1982 University of California, Los Angeles
  - Ph.D., 1991 University of Illinois, Urbana-Champaign
- Professional
  - Senior software engineer, Center for Supercomputing Research and Development (CSRD), UIUC
  - Assistant / Associate / Full Professor (1991, 1996, 2003), Computer Science, University of Oregon
- Awards
  - Fulbright Research Scholar (The Netherlands, Austria) NSF Young Investigator, von Humboldt Senior Scholar

Slides

- ftp://ftp.cs.uoregon.edu/pub/malony/UGC2004
  - intro-final.pdf
  - overview-final.pdf
  - component-final.pdf
  - application-final.pdf