



Euro-Par 2006

Dresden, Germany

29th August - 1st September 2006

European Conference on Parallel Computing

Topic 10: Parallel Numerical Algorithms

Description

Fast and robust parallel and distributed algorithms for important numerical tasks and their efficient implementation in easy-to-use portable software components are crucial for computational science and engineering. The sessions of this topic will be a forum for the presentation and discussion of new developments in the field of parallel and distributed numerical algorithms, covering all aspects from basic algorithms via their efficient implementation on modern parallel or distributed architectures (including clusters and grids), to software design and prototyping in mathematical or simulation software environments and performance analysis. Contributions dealing with algorithms and software for problems in all of these areas are welcome. Special focus will be put on parallel and distributed algorithms for the following areas:

Focus

- Partial differential equations
- Ordinary and differential algebraic equations
- Large sparse or dense linear systems and eigensystems
- Nonlinear systems
- Quadrature
- Fast transforms (wavelets, FFTs)
- Basic Linear Algebra
- Integral equations
- Domain decomposition and shared memory algorithms

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