First Latin American SCAT Summer School

Universidad Técnica Federico Santa María, Valparaíso

Introduction to PETSc

One of a series of mini-courses taking place 6-12 January 2007

Description

The Portable, Extensible Toolkit for Scientific Computation (PETSc) provides a framework for development of computational science codes. Although scalability and high performance are crucial for scientific applications, the usability often turns upon other software factors, such as version control, modular design, and extensibility. We will discuss each of these issues in the context of PETSc development. Moreover, we will present examples of PDE solvers developed in PETSc with advanced capabilities, such as unstructured meshes, multigrid, and parallel sparse direct solvers. This course should enable a researcher to independently develop usable, scalable, extensible code with PETSc.

Attendees are encouraged to bring a laptop as installation help will be provided.

Visit the PETSc web site: www.mcs.anl.gov/petsc

The course will cover

- Design of large scale simulations
- Solution of linear and nonlinear algebraic systems
- Debugging, profiling, and management of scientific code
- Structured and unstructured meshes
- Example problems in PETSc

Lecturer:

Dr Matthew G. Knepley, Argonne National Laboratory, Chicago, IL.

This course can be offered in English.

For more information, email info@scat-alfa.eu or visit www.scat-alfa.eu

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