The Abdus Salam International Centre for Theoretical Physics
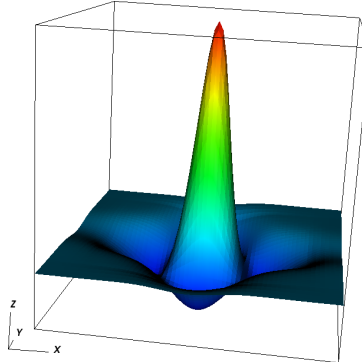
www.ictp.it

UNESCO
United Nations Educational, Scientific and Cultural Organization

IAEA
International Atomic Energy Agency
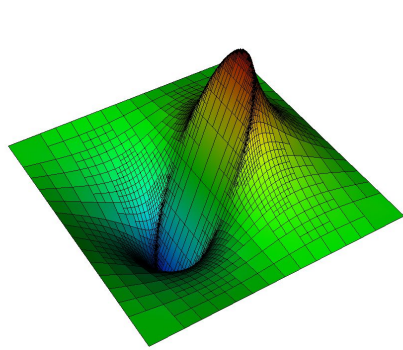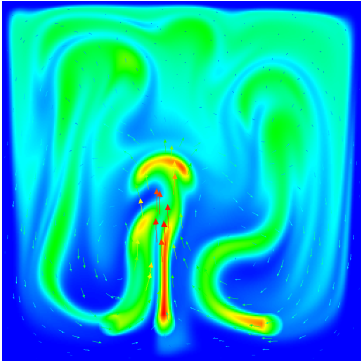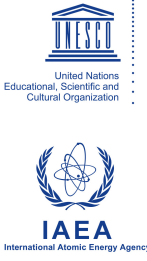
4th Workshop on Advanced Techniques for Scientific Programming and Management of Open source Software Packages
followed by
Deal.II Users and Developers Training

7 - 24 March, 2016

(Miramare - Trieste, Italy)

The Abdus Salam International Centre for Theoretical Physics is organizing the 4th edition of the **Workshop on Advanced Techniques for Scientific Programming and Management of Open Source Software Packages**, to be held at ICTP (Trieste, Italy) from the 7th to the 18th March 2016, followed by a one-week Deal.II Users and Developers Training.

Modern scientific research work involves using computers for simulation, modeling, data processing and visualization. The growing complexity of those calculations favors using software packages that provide an abstract interface to computations through scripting language interfaces, modular software design, and code reuse. Such design patterns also facilitate transparent optimizations for modern multi-core architectures or accelerators, and specialization of contributors to subsets of a package program. Software package developers therefore need to learn how to work effectively in a collaborative environment.

This Hands-on Workshop focuses on disseminating best practices and building fundamental skills in creating, extending and collaborating on modular and reusable software frameworks with a scripting language interface. The curriculum also covers using modern collaborative software management tools, testing frameworks, and embedding structured documentation into software packages.

The optional Deal.II Users and Developers Training during the third week takes the deal.II finite element library as an example and provides specialized training for computational scientists that already are or want to become deal.II developers. The training will consist of lectures on the deal.II software overall design and implementation details as well as hand-on tutorial sessions/small projects by deal.II experts and developers.

Participation
Applicants from all countries that are members of the United Nations, UNESCO or IAEA may attend. As it will be conducted in English, participants should have an adequate working knowledge of this language. As a rule, travel and subsistence expenses of the participants should be borne by their home institutions. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants, who are nationals of, and working in, a developing country. Such support is available only to those attending at least the first two weeks of the program.

Other essential requirements are a strong knowledge of the Linux command line environment, as well as a good knowledge of one of the following programming languages: FORTRAN, C, or C++.

There is no registration fee.

HOW TO APPLY FOR PARTICIPATION
The Online Application can be accessed at the activity website: http://indico.ictp.it/event/7657/. Comprehensive instructions will guide you step-by-step on how to fill out and submit the application form.

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*Luca Heltai
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DEADLINE
to submit applications

10 January 2016