

# Latin American Introductory School to Parallel Programming and Parallel Architecture for High Performance Computing



**12 - 23 February 2018**  
**CINVESTAV and ININ, Ocoyoacac, Mexico**

Further information:  
<http://indico.ictp.it/event/8344/>  
[smr3187@ictp.it](mailto:smr3187@ictp.it)

The School has the goal of teaching participating scientists about modern computer hardware and programming to provide a foundation for future computational research using High Performance Computing (HPC). Participants will go through an intensive programme with a focus on practical skills.

## Description:

School participants will learn to improve the efficiency of their research codes, and to parallelize them. Lectures on a selection of technical aspects of modern HPC hardware will be mixed with introductions to widely used parallel programming tools and libraries. The hands-on sessions will allow participants to practice on small example problems of general scientific interest. Example topics will cover numerical methods and parallel strategies, as well as data management.

The programme specifically addresses the needs of scientists using, writing, or modifying HPC applications. It will be mainly based on fundamental HPC-relevant features in widely used scientific software for high-performance computing:

- Computer architectures for HPC and how to optimize for them
- Parallel programming tools (MPI & OpenMP)
- Portable, flexible and parallel I/O (HDF5)
- Parallel programming best practices
- Floating-point math
- High-performance libraries for the solution of common math problems

## How to apply:

Online application:  
<http://indico.ictp.it/event/8344>

Female scientists are encouraged to apply.

## Grants:

A limited number of grants are available to support the attendance of selected participants from developing countries, with priority given to young scientists from Latin America. Accommodation and meals are covered at the campus for all selected participants. There is no registration fee.

## Directors:

- J. Klapp, ININ and Cinvestav-Abacus
- I. Giffler, Cinvestav-Abacus
- L. Sigalotti, UAM-Azcapotzalco
- E. Santos Rodríguez, MCTP
- M. Cruchaga, Universidad de Santiago de Chile

## Lecturers:

- W. Bangerth, Colorado State University
- R. Berger, Temple University
- G. Pringle, EPCC
- I. Girotto, ICTP

## ICTP Scientific Contact:

- I. Girotto, ICTP

## Deadline:

**26 November 2017**



The Abdus Salam  
International Centre  
for Theoretical Physics  
[www.ictp.it](http://www.ictp.it)  
Trieste, Italy

