



The Abdus Salam  
International Centre  
for Theoretical Physics



# Workshop on Computer Programming and Advanced Tools for Scientific Research

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# Motivations

- Growing demand of compute simulation in modern scientific research
- Increasing complexity of compute architecture
- Scripting, modular software design, code reuse & tools for collaborative software management
- Technology Transfer to the Scientific Community



# Main Topics

- Scripting for scientific computing
- Writing modular, extensible, and reusable code
- Modern Computer architecture
- Multithread and SIMD programming (OpenMP, OpenCL)
- Integration of multiple programming languages
- Effective use of source code management systems



# The Workshop

- Intensive mix of talks & hands-on
- Special Section on Saturday
- 2<sup>nd</sup> week dedicated to “small projects” and collaborative software development
- After-dinner Informal discussions



# Thanks you all for coming and being part of this ICTP Activity!

## Acknowledgements

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- Mrs. Rosa Del Rio
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