### Welcome!



- Nicola Seriani
- Associate Research Scientist
- The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy

- M.Sc. in Physics,
  University of Trieste, Italy
- Ph.D. in Materials Science,
  TU Dresden, Germany
- Postdoc in Vienna, Austria







My hometown Trieste 200,000 inhabitants Port at the Adriatic Sea



http://ontheworldmap.com/europe/





### Barcolana regatta



https://www.facebook.com/RegataBarcolana/

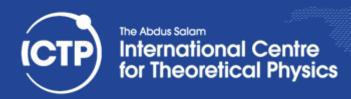




Miramare Castle, at walking distance from ICTP



https://commons.wikimedia.org/wiki/File:Miramare2.jpg









#### What is ICTP?



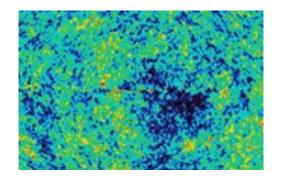


- Founded in 1964 by Nobel Laureate Abdus Salam to enhance international cooperation through science
- Combines world class research with a unique global mission of building science capacity in the developing world
- Governed by tripartite agreement between Italy, UNESCO and IAEA

### **Research at ICTP**



High Energy Cosmology and Astroparticle Physics

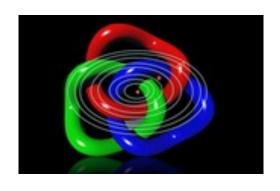


**Applied Physics** 



Also: Sustainable Energy and High Performance Computing

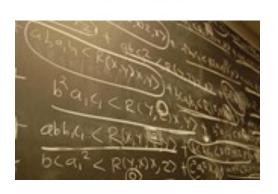
Condensed Matter and Statistical Physics



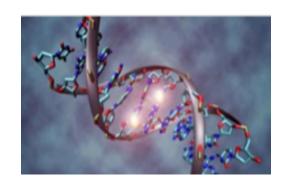
**Earth System Physics** 



**Mathematics** 



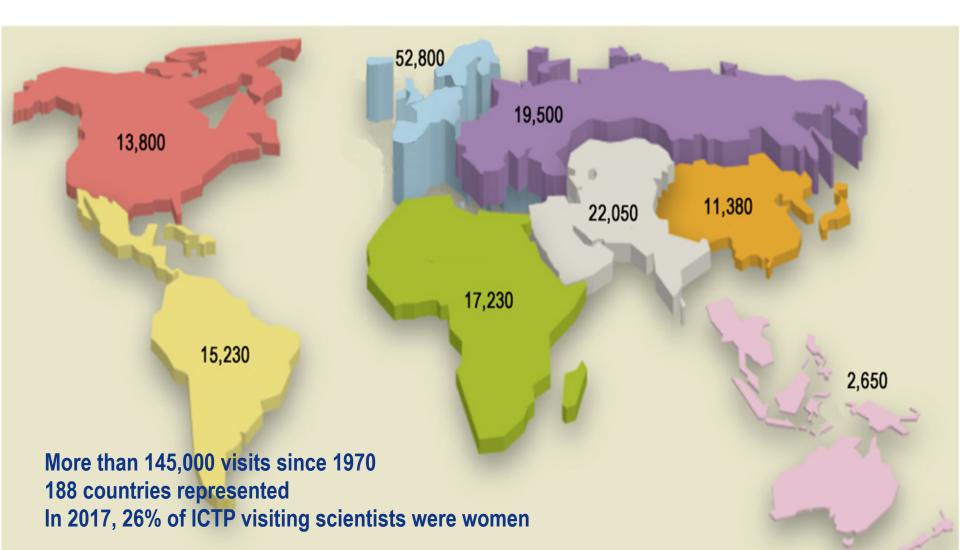
**Quantitative Life Sciences** 



## **Training at ICTP**



# ICTP visiting scientists: where do they come from?



## My research



Nicola Seriani

Condensed matter physics and computational materials science;
 I investigate physical processes taking place in solids and liquids:
 How electrons in solids are excited by light, how they are transported to the surface, how they participate in chemical reactions at the surface

To solve the equations that describe these processes (like the Schroedinger equation), I use computers, mostly supercomputers