



The Abdus Salam
International Centre
for Theoretical Physics



Panel on "Early career researchers" (1h0')

Convener: Angela BRACCO

Panelists:

Ruhi CHITRE (IAPS, U.o. Warwick)

Mattia OSTINATO (EPS Young Minds, U.o. Barcelona)

Valentina MARIANI (U.o. Perugia)

Aishwaryo GHOSH (S.N.Bose National Center for Basic Sciences, India)

Trieste, July 12 2022



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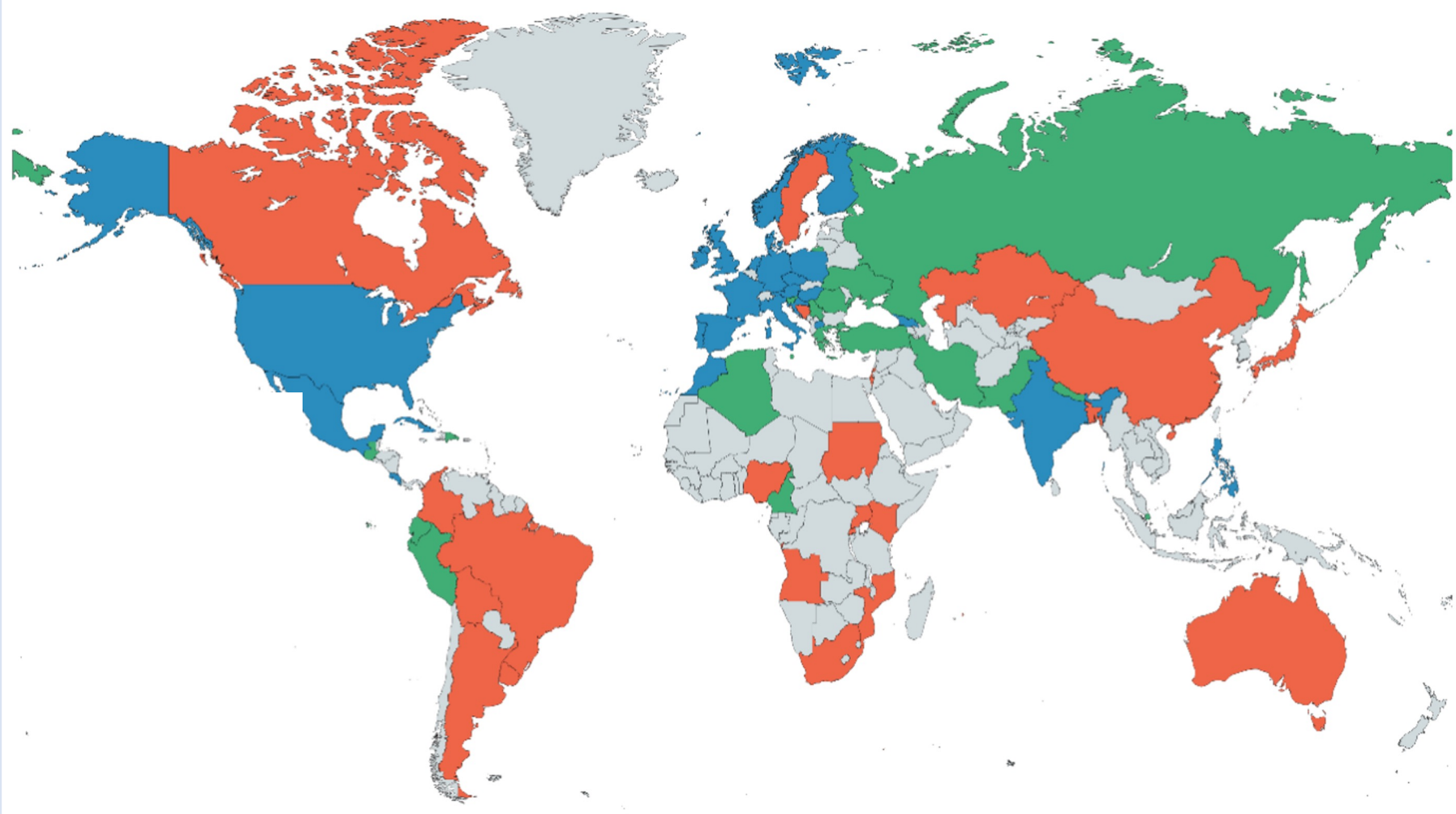


Please tell us what are your interests in research and education and the plans you have in order to pursue these interests in the best possible way.

Could you tell us the motivations and/or specific facts occurring during your study that are driving your future plans?



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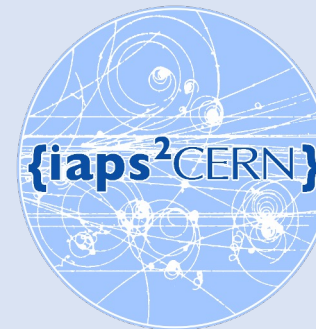


{iaps}

*Total
Members:
approximately
90 000
Students from
70+ countries!*



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Valentina Mariani

I'm a researcher at Università degli Studi di Perugia.

I work in particle physics and I'm a member of the CMS Collaboration at the CERN LHC.

My scientific interest is shared between different topics:

- Detector development, since my group in Perugia is responsible of the construction of part of the CMS tracker detector for high luminosity of LHC
- Track reconstruction, I'm actually the convener of the CMS Tracking Group
- Data analysis, with a particular focus on flavour physics and QCD



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I decided to become a (particle) physicist after a school trip at CERN, during my last year of high school, that was so inspiring!

Also for this reason I think that dissemination and outreach may have a huge impact in society.

My commitment in outreach activities is high, if I only convinced one student in becoming a physicist that would be a huge success!

In 2020 I won the “**L’Oréal-UNESCO For Women in Science**” award that provides a grant to young female scientist to enforce the role of women in science.

The program is active in many countries in the world and grants are available every year.





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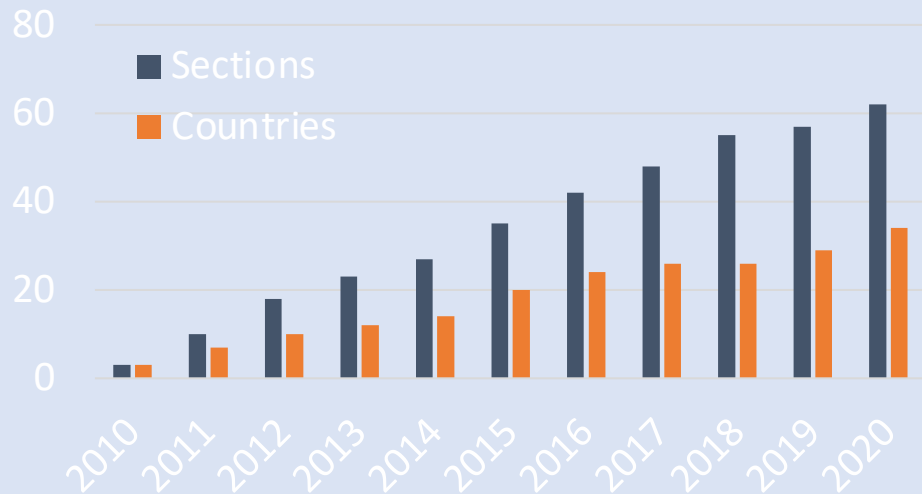
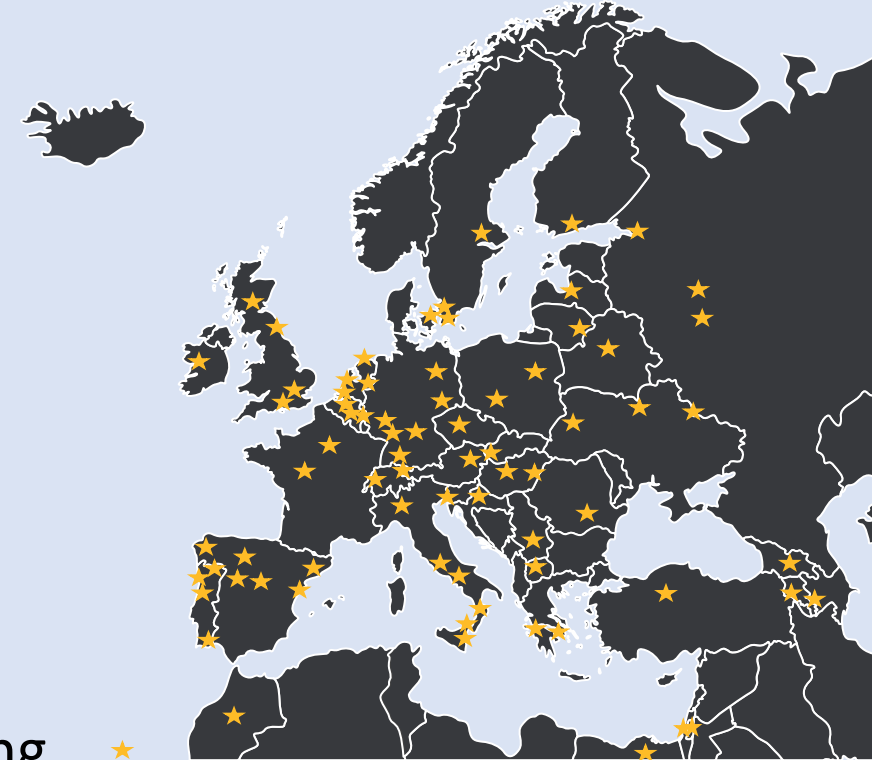
Mattia Ostinato

- PhD Student at University of Barcelona and member of the University of Barcelona Institute of Complex Systems
- Research Interests: Out of equilibrium dynamics in driven systems
- Chair of the European Physical Society Young Minds programme (EPS YM)
- Defining experiences: Erasmus, Spring School in Complex Systems @ ICTP and Naples Young Minds Section (PONYS)



EPS Young Minds

- Started by EPS in 2010 as a platform for students and early career researchers in Physics
- More than 60 Sections in 36 countries
- Aims to create a Network of Young physicists in Europe
- Fosters diffusion of physics among the broad public



Our approach is supporting activities organized by local groups for local communities and encourage their interaction



Aishwaryo Ghosh

I'm a researcher at S.N. Bose National Centre for Basic Sciences.

I work in theoretical Condensed Matter Physics, particularly in integrating data-driven Machine Learning methods to complement conventional condensed matter research. The recent advent in computational prowess and techniques and public data really transformed this route of looking at materials science issues.

My scientific interests are in general:

- Novel material discovery using a combined machine learning and first principle techniques.
- Predicting properties in materials of choice. I am also currently working on developing a ML-based force fields for a class of material.





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I became interested in Machine Learning/A.I. as a hobby during my Bachelors. Later, fortuitously, I got the chance to work on a project that unites machine learning in solving a materials problem, and the old appreciation was rekindled.

I think the field of artificial intelligence research in itself is developing by leaps and bounds, and we can port their techniques to solve problems in our field. In the next few years, it will be very important to strengthen the bridge between these two fields, and I wish to be a part of this journey.

I also tutor school students in Physics, I try to inspire them to love the subject, since there is a general trend of being scared of science studies in my country.

I was awarded the INSPIRE scholarship after my high school that provides some monetary and technical support for students who wish to pursue natural science study.



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Do you expect to find barriers that prevent you to carry out what you have in mind in relation to your career?

Are these barriers due to limitations in the educational and research systems?

Are you willing to work together with more experience persons to try to clearly identify these limitations and find good solutions for them? ***Do you think that organizations as IUPAP can help in this?***



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Do you think that basic science is the drive for innovation at benefit of our life?

Do you think that curiosity driven basic science is not only an intellectual challenge but it leads to important breakthroughs improving the quality of our life?



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Do you think that the educational and training system need to interact in a more effective way with the industrial system to give better job opportunities also in this sector?