Young Researcher Meeting,
Cagliari 2017

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PREFACE

Held annually since 2009, the Young Researcher Meeting (iphysnet.com/wp/yrm) gathers together students, post-doc fellows, and young researchers eager to discuss the current progress and developments in various areas of physics.

The dissemination of results and sharing of knowledge are indeed activities that should be valorised since the early stages of anyone's scientific career. This has long been the spirit of the conference, and it has a deep influence on its format. In fact, the Young Researcher Meeting aims to create strong bonds among the attendees and to promote collaboration and cross-fertilisation among different research areas. It does so in an informal set-up, where students and young researchers introduce their work to their peers in brief presentations and a lively poster session. Questions, discussions, and interaction come naturally and this has brought ever-increasing success to the conference, making it an unmissable appointment for young researchers.

The conference has been hosted in various locations around Italy by several major institutions throughout the years. The 8th edition was held at the Cittadella dei Musei in Cagliari, from May 29th to June 1st 2017, and it was jointly organised by the freshly established International Physicists Network association (iphysnet.com) and the Department of Physics of the University of Cagliari.
This edition rounded up over 60 participants belonging to universities and research centres in Europe, Asia, and South America. The plenary talk sessions covered areas such as Astrophysics and Cosmology, Biomedical and Particle Physics, Condensed Matter and Theoretical Physics — topics that have been deepened and widened in the more interactive and informal *poster & wine* session.

Moreover, the programme included a guided tour to the Sardinia Radio Telescope; a *lectio magistralis* by Prof. Cristiano Galbiati on dark matter and neutrinoless double beta decays; and invited talks by Dr. Carlos Mejia-Monasterio from the Technical University of Madrid, Spain, and Dr. Paolo Pani from the University of Rome “Sapienza”, who presented cutting edge research in their respective fields in an appealing and enjoyable way. During the conference, the first meeting of the International Physicists Network took place, an Italian non-profit association that aims to connect young physicists across the world and presides the organisation of the Young Researcher Meeting. This edition also featured a pleasant social dinner in a local restaurant.

This volume consists of a selection of the contributions presented at the conference as either talks or posters. These cover topics in Astrophysics and Cosmology, Biomedical and Particle Physics, Condensed Matter and Theoretical Physics.

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Acknowledgments

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We are grateful to Prof. C. Galbiati for his enthusiasm in accepting to deliver the *lectio magistralis*, to Dr. C. Mejia-Monasterio and Dr P. Pani for sharing their knowledge and experience as invited speakers, and to Dr. A. Possenti, Dr. M. Bacchetti, Dr. M. Murgia and Dr. M. Burgay for having organised and hosted the visit to the Sardinia Radio Telescope ([http://www.srt.inaf.it](http://www.srt.inaf.it)).

The event was broadcast live on the conference website, and the recordings are available on [Youtube](http://www.youtube.com).

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channel at http://www.youtube.com/c/YoungResearcherMeeting.