

# MASS e-NEWSLETTER

Third Issue: June 30th 2024

## In this issue:

Present status of MASS  
 Curriculum Enhancements  
 Guest Lectures and Schools  
 Third intake of students  
 Additional Items  
 More from Belgrade

## Present status of MASS

The Master MASS is nearing the end of its first edition in 2024 and is proving to be very successful, with a few students already having been awarded PhD grants. The program maintained its high level of combining theoretical knowledge with practical applications, preparing students for astronomy and space science leadership roles.

### Curriculum Enhancements

**Courses:** minor changes in the course structures were made to adapt to students' feedback and to incorporate new topics in the current courses.

**First Internships:** Students produced notable research preparations on various topics during the S3 that started in September 2023. These were presented during the Winter School in January 2024.

**First Theses:** The first S4 thesis research projects began in March 2024, with many students moving again between universities. A short preparation of “My thesis in 180s” will be presented at the Second Summer School in France in July 2024.

### Guest Lectures and Schools

The **Welcome Week** for the second edition took place at the Tor Vergata University of Rome (in Villa Mondragone) between the 25th and 27th of September 2023, with the participation of student representatives from the first course edition, who met the newcomers, as well as representatives of the partner Universities, both in person and online. At the beginning of October, Welcome Days took place at the partner Universities, too, for the start of Edition 1 third semester, with guided tours of the Astronomical Observatory in Belgrade and of the Valrose campus, laboratories and Observatory in Nice.

The **First Summer School** took place in Bremen from the 17th to the 21st July, 2023 and focused on the topics of high-energy programs and general relativity. Both theoretical and hands-on courses were presented, with part of the lectures given by guest lecturers from the partner universities, the head of the space company OHB located on the University campus in Bremen and the head of the DLR (German Space Agency) institute for satellite systems and inertial sensing. Guided tours of the OHB, the DLR Institute of Space Systems and the ZARM (Center for Applied Space Technology and Microgravity) were organised in addition to a city tour. All these activities richly enhanced the culture and space-science aspect of the European Master.



The ZARM institute buildings with the drop tower and the central area of the University of Bremen

The **Second Winter School** with edition 1 and 2 students took place at the Tor Vergata University of Rome from the 15th to the 19th January, 2024, focussing on From Stars to Cosmic Explosions: Bridging Scales in Astrophysical Data Analysis. Many hands-on activities took place, and edition 1 students presented a summary of their internships. A visit to the Monte Porzio Catone Astronomical Observatory took place on 18th January.

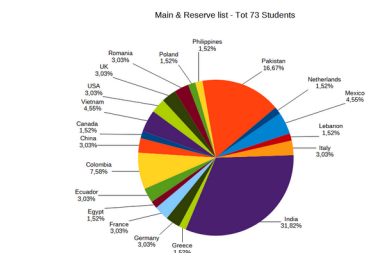
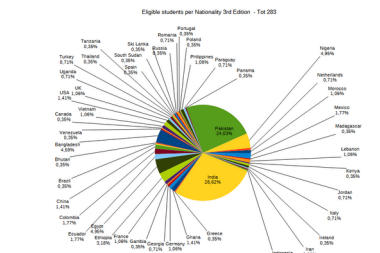
**Distinguished Speakers:** The program hosted several high-profile guest speakers, leading experts from international reputations during the course year, and also during the Winter and Summer Schools.

- At University of Belgrade: Zeljko Ivezic (University of Washington, Rubin Observatory, USA), Lovro Palaversa (Rudjer Boskovic Institute, Croatia), James Leftley (UniCA), Demetra De Cicco (University of Naples, Italy)

For the Second Winter School: F. Thévenin (UniCA), A. Guzman Mesa (Euresearch, Switzerland), Y. Khusanova (MPIA Heidelberg, Germany).

### Third intake of students

In April 2024 we made the selection for the third intake of students. Out of a total of 436 applications, 283 fulfilled the general eligibility criteria and were evaluated by the MASS Selection Committee. As a result, 73 applicants were selected for admission. A total of 25 full scholarships and 6 fee waivers were offered to the highest ranked applicants.

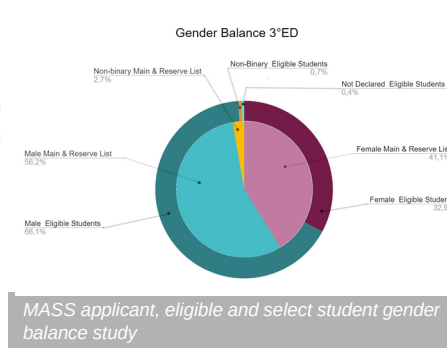


MASS applicant nationalities (left), MASS student nationalities (right)

### Additional Items

**External Advisory Panel:** The external advisory board members are:

- **Andrew Bunker**, Professor of Astrophysics, University of Oxford, UK
- **Raffaele Crapolicchio**, Eng., ESA/ESRIN – SERCO
- **Bozena Czerny**, Professor, Center for Theoretical Physics of the Polish Academy of Sciences, Poland
- **Pece Podigachoski**, PhD, Rabobank, Netherlands



MASS applicant, eligible and select student gender balance study

**Mass Code of Conduct:** The CoC for the MASS program was finalized and published in August 2023

**Community Engagement:** We presented the MASS program to more than 200 universities around the world. This resulted in the reception of 436 applications for the third edition selection.

### More from Belgrade

MASS students participated in the **XX Serbian Astronomical Conference**, 17th-20th October, 2023, during which they primarily got an overview on astronomy research in Serbia, but also from international guests. One student had a poster contribution (Nicolás Guerra Varas “SiO Outflows in the Most Luminous and Massive Protostellar Sources of the Southern Sky”, see for details <https://sac20.aob.rs/>).

All 5 MASS students attending Belgrade node in S3 provided contributed talks within the student research session of the 13th Symposium "Mathematics and Applications", 1st-2nd December, 2023. The students delivered notable 20min talks primarily focused on their internship and research work, see <https://simpozijum.matf.bg.ac.rs/home.html>

Within the first year of Edition 1, the local office at the Belgrade node worked intensively with the student offices of the University of Belgrade and Faculty of Mathematics, to implement the MASS program and obtained the re-accreditation of MASS as a joint study program.