

## PREFACE

Ten years after the First Workshop on Robotic Autonomous Observatories, the number of automatic astronomical facilities worldwide continues to grow, and the level of robotisation, autonomy, and networking is increasing as well. This is having a strong impact in many astrophysical fields, like the Solar System studies, the search for extra-solar planets, the monitoring of variable stars in our Galaxy, the study of active galactic nuclei, the detection and monitoring of supernovae, and the immediate follow-up of high-energy transients such as gamma-ray bursts and since 2017, neutrino and gravitational wave emitters.

But, and this is also important, not only scientific aspects are relevant in this field. Development of frontier technology is essential in order to transfer the knowledge, which is also a good opportunity for the high-tech companies. Moreover, robotic telescopes are increasing the public outreach capabilities as well as the participation of normal people in some particular projects, in the context of Citizen Science. The role of robotic systems in the field of Space debris tracking and surveillance is also most essential, due to the increasing number of human-made debris at low orbit and the importance of robotic telescopes in this field.

The manuscripts published in these Conference Series of the Revista Mexicana de Astronomía y Astrofísica are the fruit of the VI Workshop on Robotic Autonomous Observatories held in Mazagón, Huelva (Spain) on September 30 - October 4, 2019. The main focus of the workshop was to deal with the new and existing astronomical facilities whose goal is to observe a wide variety of astrophysical targets with no (or very little) human interaction. The workshop became an international forum for researchers to summarise the most recent developments and ideas in the field, with a special emphasis given to the technical and observational results obtained within the last two years.

As in 2009, 2011, 2013 and 2015, Torremolinos (10 km away from Málaga) was the perfect place for hosting the workshop with pleasant early October temperatures and the possibility for swimming in the Mediterranean sea at any time, as the Conference room at the refurbished Smy Hotel Costa del Sol was only 200 m away. At only twelve kilometres away, the 3,000 yr old Málaga Town offered new views of its centre, thanks to new archaeological excavations, with its magnificent view from the Alcazaba fortress during the Guided Tour to Málaga, prior to the Conference dinner in Parador Nacional de Gibralfaro over the Málaga bay. The excursion day to El Caminito del Rey Path (a 7.7 km walkway, pinned along the steep walls of a narrow gorge El Chorro near Ardales, in Málaga) was also a unique experience for many of the attendants. We also accompanied Dr. Jerry Fishman, who gave the Workshop opening talk, during his induction as Académico at Málaga Academy of Sciences on October 3, at the magnificent Hall of Mirrors' at Málaga Town Hall.

The Workshop was organized by both the Instituto de Astrofísica de Andalucía of the Spanish Research Council (IAA-CSIC) and the Department of System Engineering and Automatics at Universidad de Málaga (UMA). We want to thank the members of the Scientific Organizing Committee (SOC): A. Bayo, M. D. Caballero-García, A. J. Castro-Tirado (chair), A. R. Gibss, S. Guziy, L. Hanlon, D. Martínez-Delgado, D. Hiriart, N. Kawai, V. Lipunov, S. B. Pandey, C. Pérez del Pulgar, F. F. Özeren and B.-B. Zhang for arranging an excellent scientific programme, and express our gratitude to the members of the Local Organizing Committee (LOC): A. Castellón (chair), S. Castillo, E. Fernández-García and Y.-D. Hu.

This is the Sixth workshop, which has increased in number of registered participants (90), as compared with the first one of 2009, and, which is worth noting, it has increased its internationalization level, since there are now 25 nationalities this year, compared to the 15 nationalities of 2009. Together with the Oficina de Turismo de Torremolinos, they made of the staying of the 90 participants (and accompanying persons) in

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Málaga-Costa del Sol an unforgettable experience (including the traditional swimming-at-midnight after the conference dinner, as in any AstroRob Workshop since 10 years ago).

Finally, we appreciate all the anonymous referees and *Revista Mexicana de Astronomía y Astrofísica* for the very careful edition of this Issue.

We also thank Anastasiia Fastovets and Irina Guziy for designing the nice Workshop announcement poster, and María Eva Alcoholado-Feltström for her assistance as Workshop secretary in order to achieve a perfect organization.

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