

Celebrating a face-to-face congress of young researchers in Optics after the pandemic years: the I NW MYRO

Bastían Carnero^{1,*}, *Alba de las Heras*², *Alejandro Doval*¹, *Álex Martín-Rodríguez*², *Alicia Muñoz-Ramos*¹, *Ana García-Cabrera*², *Carlos Damián Rodríguez-Fernández*¹, *Damián Insua-Costa*¹, *Irene Romo-Díez*¹, *Isabel Rodríguez-Pérez*², *Javier Prada-Rodrigo*², *Javier Varela-Carballo*¹, *José Paz-Martín*¹, *María Sánchez-Hernández*², *María Jesús Martínez-Morillo*², *Mario Guerras-Rodríguez*², *Millán Pérez*², *Sabela Fernández-Rodicio*¹, *Verónica Villa-Ortega*¹, *Víctor W. Segundo-Staels*² and *María Teresa Flores-Arias*¹

¹Dissemination Group and Students Association LUZADA, USC-OPTICA Student Chapter and Santiago USC Young Minds Section, Universidade de Santiago de Compostela, E-15782 Santiago de Compostela, Spain.

²OSAL Student Chapter, Universidad de Salamanca, E-37008 Salamanca, Spain.

Abstract. This contribution reports the organization and celebration after the Covid-19 pandemic of a singular scientific conference focused on early-career researchers from the Spanish universities of Santiago de Compostela and Salamanca: the “I Northwest Meeting of Young Researchers in Optics (I NW MYRO)”.

1 Introduction

In recent months, with the appearance of vaccines and the improvement of the situation resulting from the Covid-19 pandemic, new face-to-face events are starting to take place again. Scientific congresses have been the main affected by this scenario and despite the value of the online alternatives [1,2], it is difficult to match the enriching experience of on-site scientific meetings. It is our responsibility as young members of the research community to encourage the recovery of these events, as they will provide synergies of great interest for our future careers. This idea led to the birth of the “I Northwest Meeting of Young Researchers in Optics (I NW MYRO)”, an exciting three-day congress focused on the research and outreach of optics and photonics within the northwest of Spain and north of Portugal. The event was organized by young researchers and students from the following outreach groups: LUZADA, USC-OPTICA Student Chapter and Santiago Young Minds Section, from Universidade de Santiago de Compostela (USC); and OSAL Student Chapter from Universidad de Salamanca (USAL).

The meeting was held in Santiago de Compostela, on 5th-7th May to commemorate the International Day of Light 2022 and it was devised as a unique opportunity to support young physics and optics and photonics students and researchers in their career development, as well as to strengthen scientific and industrial connections in the northwest of the Iberian Peninsula and even internationally. The event received the support of the main scientific societies such as Optica, European Physical Society (EPS), and Real Sociedad Española de Física (RSEF), and gathered more than 50 experts in optics from industry and academia. The event concluded with an outreach event that involved two local museums.

2 Congress programme

The event consisted in a three-day meeting focused on research exchanges and networking opportunities for the young scientific community in optics and photonics of our area. We highlight below the following central activities of the I NW MYRO, distinguishing between academic and outreach sections.

2.1 Academic section

2.1.1 Plenary talks

One of the core objectives of the congress was to bring together the main research institutions in the northwest area of the Iberian Peninsula. The I NW MYRO was able to assemble relevant experts and researchers from all universities and research centres in the area: USC, USAL, University of Vigo (UVIGO), Universidade da Coruña (UDC), Laser Laboratory for Acceleration and Applications (L2A2) and Iberian Nanotechnology Laboratory (INL). In this session, during the plenary talks, the invited experts discussed diverse optics and photonic topics such as: laser material processing, photonic devices in crystalline mediums, natural photonics, etc.

2.1.2 Industrial talk

Industry tends to be the great unknown at universities. Researchers themselves are often unaware of how valuable their training is for companies, and the great opportunities that industry offers after academia. With the intention of improving this scenario, an industrial talk was organised during the I NW MYRO, with the presence of

*Corresponding author: bastian.carnero.groba@usc.es

two companies from the northwest region (BFlow SL and AIMEN) and an international one (Menlo Systems). In all these companies, optics and photonics play a decisive role in their production processes, and their representatives had the opportunity to present their main R&D lines. Afterwards, a roundtable was held in which the representatives were able to discuss university spin-offs, patents, and R&D trends in photonics with the audience.

2.1.3 Women in Optics

Highlighting the work of female scientists and supporting their careers is a key part of our labour not only as members of scientific groups, but also as members of society. We can proudly state that all the sessions in the I NW MYRO were scheduled with a gender perspective, ensuring that both male and female scientists were provided with the same visibility. Furthermore, the programme included a “Women in Optics” session where different women scientists at different stages of their careers (Fig. 1) (PhD student, post-doc researcher and professor) could introduce their research and areas of expertise and, afterwards, integrate a roundtable to discuss the challenges that women are facing in their scientific careers. This session addressed interesting and thought-provoking topics such as deterring physicist stereotypes, facing gender bias, motherhood during a research career, or the importance of female references.



Fig. 1. Women in Optics roundtable, featuring female researchers at different stages of their careers.

2.1.4 Young researchers talks

Knowing how to present their investigation constitutes a key skill for young researchers. Therefore, during the I NW MYRO young researchers talks, all participants were able to face the podium (Fig. 2) (some of them for the first time in their careers).

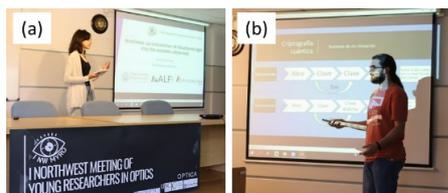


Fig. 2. Young researchers a) moderating the session and b) presenting their research lines.

2.2 Outreach section

Apart from the academic section of the program, two outreach events were carried out for the general public in

collaboration with two important local museums: the House of Sciences of A Coruña (Fig. 3a) and the Natural History Museum of the USC. These events were not only intended to commemorate the International Day of Light 2022, but also to bring science closer to our society. Spreading a scientific culture is a key action for inspiring new generations of scientists. In our case, we aim to foster the love for optics and physics with experiments covering diverse light phenomena like reflection, refraction, holography, fluorescence, or phosphorescence, as well as funny light experiments involving polarization glasses, long-exposure photography (Fig. 3b) or 3D cinema. Holding the events in parallel (they were celebrated on the same day in two different cities) was a logistical challenge but it allowed us to reach a very large audience (Fig. 3c) of approximately 1000 people of all ages.

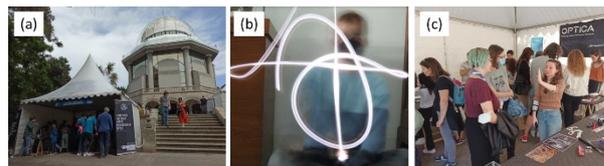


Fig. 3. A look at our outreach activities. a) Our stand next to the House of Sciences of A Coruña. b) Long-exposure photography experiment. c) Disseminating optics to a varied audience.

3 Conclusion

In conclusion, the I NW MYRO was successfully celebrated from 5th to 7th May 2022 in Santiago de Compostela, featuring plenary talks given by a large and egalitarian list of excellent researchers in optics and photonics, oral contributions from early-career researchers, industrial and women in science roundtables, and outreach activities organized in cooperation with two science museums. This was possible thanks to the hard work of student groups supported by scientific societies and universities. The face-to-face format was crucial in the creation of strong bonds among the young research community at I NW MYRO, which may lead to synergies between the future researchers in optics and photonics in the Iberian Peninsula.

We thank Optica, the European Physics Society (EPS), the Real Sociedad Española de Física (RSEF) and Universidade de Santiago de Compostela (USC) for their economical support to the I NW MYRO. We also thank Universidad de Salamanca (USAL) and our partners SEDOPTICA, BFlow SL, AIMEN and Menlo Systems GmbH.

References

1. C. D. Rodríguez-Fernández, B. Carnero, et al. *EPJ Web Conf.* **255**, 12003 (2021)
2. A. García-Cabrera, V. W. Segundo-Staels, et al. *XIII Reunión Nacional de Óptica*. Contribution #201 (2021)