

Name of the Union

Activities' Report - Year 2016

Delegate/Author Name

Paolo De Natale

1. Introduction

The ICO promotes Optics since 1948, mainly through international research collaboration and co-sponsorship of international events (10-12 per year) and fosters north-south collaboration through a traveling lecturer program. Through a Committee for the Regional Development of Optics and Photonics, ICO looks for ways to assist optical scientists and engineers in developing countries through the exchange of information with joint organization of schools, often in collaboration with the International Centre for Theoretical Physics (ICTP) in Trieste, Italy.

2. Main activities carried on by (Union name) during 2016 relevant for Italy and for CNR

Co-organization of Schools at ICTP. Trieste.

3. Activities carried on by Paolo De Natale within the Union during 2016 and impact on the Italian scientific community

As Italian Representative, during 2016 I contributed to write a document to promote ICO at the level of International Scientific Union of the International Council for Science – ICSU. As of 2005, ICO has been a Scientific Associate, and is now ready to participate on a new level of direct interaction with the other ICSU Unions. This would strengthen and widen the initiatives carried on worldwide by ICO.

The main motivation for such request is that Optics and photonics is no longer solely a branch of physics: it is a multidisciplinary activity and common endeavor of physicists, chemists, biologists, astrophysicists, electrical and mechanical engineers, and others - it became an enabling science. On that basis ICO as a Union has the potential to enhance ICSU's scientific activities.

A proof for the close crosslinks of optics and photonics with other disciplines are recent Nobel Prizes e.g. Stephan Hell's in Chemistry for developing an optical method for nano resolution microscopic imaging. Many countries have created national optics and photonics initiatives as a means of improving the national economy, following the European Photonics 21 and the USA Photonics initiatives. This is a clear indication of the ability of the ICO and its member organizations to interface science and policy.

Evaluation of the participation in terms of benefits and membership cost

There is still a long way to go for a stronger participation of the Italian Community and for a deeper awareness towards the themes of ICO. However, the importance and the strategic value of such themes would require a higher level of awareness starting from the highest Institutional levels.

Evaluation of Italians' attendance and how to improve interest and involvement

In analogy to what I can see for other international initiatives (e.g. Photonics 21), there is far too scarce organization and support at the Italian scale, that takes to an unclear mandate for the Italian representatives in ICO as well as other organizations.

Italian experts with important roles within the Union or within related Commissions and Programs (if known)

Roberta Ramponi, director of CNR-IFN and Professor at Politecnico di Milano was vice-President of ICO in 2016 and has recently been elected ICO President, in August 2017.

4. Conclusions

Although there is much to improve in terms of awareness and participation of the Italian Community and in terms of support from Italian Institutions, the very recent election of our colleague, Roberta Ramponi, to the role of ICO President is a direct proof of the international appreciation of the Italian community in the field of Optics and of the impact our Community and our Representatives can have.

Signature

Place and date

Firenze, Nov. 1st, 2017