

EPS rewards Italian physics

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Two recent announcements have been made by the Boards of the HEPPD (High Energy Particle Physics Division) and QEOD / AMOPD (Quantum Electronics and Optics Division / Atomic, Molecular and Optical Physics Division) of the EPS (European Physical Society). They both concern Italian physicists!

The EPS HEPP Division has awarded the **2021 Giuseppe and Vanna Cocconi Prize** for an outstanding contribution to particle astrophysics and cosmology to the Borexino Collaboration for their ground-breaking observation of solar neutrinos from the pp chain and CNO cycle that provided unique and comprehensive tests of the Sun as a nuclear fusion engine. This important international recognition was established in 2011 to honor the memory of Giuseppe Cocconi (1914-2008), CERN Research Director (1967-1969), and of his colleague and wife Vanna Tongiorgi Cocconi. The prize is awarded every two years.

The Borexino underground experiment is installed at the Gran Sasso National Laboratories (LNGS) of the National Institute of Nuclear Physics (INFN). Since 2007, due to its extreme level of radiopurity which was achieved by accurate R&D and selection of all its components and by the use of innovative methods for radio purification, Borexino has been able to harvest outstanding results in solar neutrino physics. The Borexino Collaboration stems from a strong cooperation among Italy, Germany, France, Poland, the United States and Russia.

*"The results we obtained with Borexino went well beyond the most optimistic initial predictions", commented **Gianpaolo Bellini**, scientist emeritus of INFN and professor emeritus of the University of Milan, one of the founding fathers of the experiment, who led it for 22 years, "and the Cocconi Prize awarded to us by EPS is a recognition of more than thirty year of work, beginning in the late 1980s, when the experiment was conceived in the context of the scientific debate triggered by the then unsolved solar neutrino problem, and by the need to study solar neutrinos from very low energies".*

The EPS QEOD / AMOPD **2021 Vladilen Letokhov Medal** was awarded to **Massimo Inguscio** for world class experiments in atomic, molecular and optical (AMO) physics, from spectroscopy of metastable helium to pioneering work with degenerate bosonic or fermionic quantum gases, and for many services to the international AMO community.

Professor emeritus at the Campus Bio-Medico University of Rome and member of the Accademia Nazionale dei Lincei, Massimo Inguscio is engaged in research that includes atomic physics at extremely low temperatures and quantum science and technology. Former President of the National Research Council (CNR) since 2016, he was Director of the European Laboratory of Non-Linear Spectroscopy (LENS) in Florence from 1998 to 2004, and President of the National Institute of Metrological Research (INRIM), in Turin, from 2014 to 2016.

The Vladilen Letokhov Medal was established in 2018 as a joint effort by the Russian Academy of Sciences and the European Physical Society in memory of Vladilen Letokhov (1939-2009), former Vice-Director of the Institute of Spectroscopy at the Russian Academy of Sciences and pioneer in several fields of laser physics. The prestigious prize aims to recognize outstanding contributions in laser-matter interaction, in particular spectroscopy of atoms and molecules, laser manipulation of atoms, and strong field processes.



Elisabetta Baldanzi - Graduated in Physics at the University of Pisa, now staff technologist of the National Research Council (CNR), she carries out her research activity at the ViOLa Laboratory (Vision Optics Lab) of the CNR National Institute of Optics (INO) in Florence. She is a lecturer at the University of Florence (Course in Optics and Optometry - Optics for Vision). She is the coordinator of the editorial committee of *CNR Outreach*, of the institutional communication activities of the CNR INO and follows on behalf of the CNR its many projects and activities with the aim to disseminate scientific culture and research results at national and international level.



Luisa Cifarelli - Professor of experimental physics at the University of Bologna. She has carried out research in subnuclear physics and astroparticle physics at the major European laboratories. Member of the Academia Europaea and the Academy of Sciences of Bologna, honorary president of the Italian Physical Society, she has been president of the European Physical Society and of the "Enrico Fermi" Historical Museum of Physics and Research and Study Center in Italy.