

**Colloquium by Pedro Echenique on the value of basic science
on July 6th, 2017 at the Faculty of Physics**

On Thursday, July 6, 2017 17:15, Professor Pedro Miguel Echenique Landiribar will speak in Marburg about the importance of fundamental scientific research to the economic and cultural development of our modern society. The talk entitled „The Sublime Utility of Useless Science“, will take place in the Große Hörsaal (large auditorium) of the Faculty of Physics, Renthof 5 as part of a colloquium organized by the collaborative research center SFB 1083 "Structure and Dynamics of Internal Interfaces" as the starting event of its second four-year funding periods. Prof. Echenique is the president of the Donostia International Physics Center (DIPC) in San Sebastián, Spain. In 2016, his institute received an award by the European Physical Society (EPS), recognizing not only the outstanding contributions of the DIPC in the field of condensed matter physics and materials science, but also for its numerous, successful activities in the outreach and communication of science.

In his speech, Professor Echenique will explain how science and innovation stand at the center of any successful strategy for the long-term economic development of a country. In his opinion, however, it is more important and more profitable to create an atmosphere for fundamental research rather than to define specific targets. This atmosphere is a breeding ground where creativity can flourish. Echenique will illustrate how the most significant human developments in modern time have arisen from fundamental questions of basic science.

Professor Echenique is a theoretical physicist at the University of the Basque Country in San Sebastián, Spain. He was born in 1950 in Navarra in the Pyrenees. He studied physics at the University of Navarra in Pamplona, received a PhD from the University of Cambridge, UK, in 1976 and two years later became Professor of Solid State Physics at the University of Barcelona. In 1980, in the wake of dictator Franco's disposal, he stepped down from this position and served, until 1984, in the first Basque government as education and culture minister as well as their spokesman. Professor Echenique has continuously engaged himself as a vivid supporter of fundamental science in Spain. In 1999, he founded the Donostia International Physics Center (DIPC), a center of excellence that receives significant funding from private donations. Under his leadership, the DIPC evolved into a worldwide reference in the field of theoretical condensed matter physics. In addition, it has served as the nucleus for other successful research institutes in the fields of materials science and nanoscience recently established in San Sebastián.

In recognition of his fundamental scientific contributions on the interaction of electrons and ions with solids and solid surfaces, Echenique has been honored with numerous highly-esteemed prizes including the Max Planck Research Prize and the Prince of Asturias Award (Premios Príncipe de Asturias) which is considered the Spanish equivalent of the Nobel Prize. Echenique (in Basque

Etxenike) is member of the Spanish Academy of Sciences and honorary doctor of several Spanish and European universities.

As an external member and principal investigator of a guest project, Echenique has close ties to the SFB 1083 "Structure and Dynamics of Internal Interfaces" in Marburg. In July, this collaborative research center, which has a 12-years funding perspective, is embarking on its second four-year period under the guidance of its spokesman Prof. Dr. Ulrich Höfer. More than 60 researchers in 18 projects investigate the physical and chemical processes at the contact areas between two material layers. Understanding of these processes remains one of the major challenges of modern materials science, particularly because buried solid/solid interfaces are difficult to access experimentally. Yet, it is interface phenomena that govern much of the functionality of modern electronic devices or solar cells. SFB 1083, which in the new funding period includes research groups from Gießen, Münster and Jülich, will receive for its fundamental research agenda 10.5 Million Euros from the German Research Foundation (Deutsche Forschungsgemeinschaft DFG) for the next four years.

The experimental physicist Höfer and the theoretical physicist Echenique look back on more than 20 years of fruitful scientific collaboration in the area of ultrafast phenomena of electrons at surfaces. Their work has not only strongly influenced the field of surface physics. Some of their earlier results are one of the corner stones on which Marburg's collaborative research center stands today.

Additional information:

<http://www.internal-interfaces.de/>

<http://dipc.ehu.es/echenique/>

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