



## PRESS RELEASE

### *European Theoretical Spectroscopy Facility: the emergence of a new infrastructure*

With the advent of the Internet and high-speed networks, research infrastructure can now be organised using a distributed model. The European Theoretical Spectroscopy Facility (ETSF) is such a “virtual” research infrastructure, known sometimes as an “e-Infrastructure”. It combines features already present in standard research infrastructures with a collaborative yet highly distributed scientific and management organization, to carry out research in the theoretical study of materials, nanostructures and other systems.

On 28<sup>th</sup> November 2008 in Louvain-la-Neuve (Belgium), experts from the ETSF and other facilities working in related fields, together with policy-makers, will debate the different aspects of e-Infrastructure concept, as embodied in the ETSF.

Just like standard research infrastructures, the ETSF provides access for scientists from the public and private sectors to valuable research tools by issuing calls for proposals and conducting an independent evaluation process. Similar to a synchrotron, the ETSF is structured in *beamlines* covering fields of interest in theoretical spectroscopy such as optics, quantum transport, time-resolved and photo-emission spectroscopies. The innovation of the ETSF is that it gives access to world-leading theoretical Physics research tools and expertise rather than to an experimental machine. Its users may work in fields such as atomic and molecular Physics, Materials Science, Chemistry, Biology including Biophysics and Biochemistry; or in the industrial sector's laboratories researching electronics, optical components, nanosynthesis or characterisation.

Following his experience as an ETSF user, Prof. Norbert Esser, the Director of the ISAS Institute in Berlin, says:

“The ETSF helps us to convert optical fingerprint spectra into atomic scale structure information. Thanks to the support of numerical theoretical approaches as available through the ETSF, we have the chance to use optical spectroscopy as a analytical tool for nanostructures and interface structures”.

The idea of creating the ETSF builds on a 15-year ongoing and expanding collaboration between ten of the most eminent European research groups in Condensed Matter Theory and the growing demand amongst theoreticians and experimentalists for collaboration using the developed software and support for these calculations. Thanks to the European Community support through the

*Nanoquanta* Network of Excellence (2004-2008) of the 6<sup>th</sup> Framework Programme, the ETSF is now operational and is implementing its third call for proposals. The ETSF is a remote infrastructure but it is visible thanks to its Central Node at the Université Catholique de Louvain (UCL, Louvain-la-Neuve, Belgium). The ETSF has become an ICT-based e-infrastructure under the 7<sup>th</sup> Framework Programme.

General issues concerning the development of scientific e-Infrastructures in Europe will be explored on the 28<sup>th</sup> of November in Louvain-la-Neuve, based on the experience of the ETSF. The afternoon will be introduced and concluded by Prof. R. Keunings, UCL Pro-rector for Research, Prof. B. Coulie, Rector of the UCL and Mrs M.-D. Simonet, Minister of Research and New Technologies of the Walloon Region. The discussion will start with a brief presentation of the ETSF by Prof. X. Gonze, President of the ETSF, after which Mario Campolargo, Director DG INFSO/F will tell us about “Emerging Technologies and Infrastructures”. Prof. R. Godby, Chairman of the ETSF Steering Committee, will talk about “how to integrate 200 scientists”; Dr L. Reining, Vice-President of the ETSF, about “Reaching out to users”; and Prof. A. Rubio, Vice-President of the ETSF, about “State-of-the art tools for state-of-the-art users”. A user's perspective will be given by Prof. Dr T. Pichler. Finally, a round-table discussion will provide an opportunity to debate the challenges facing an emerging infrastructure, particularly a theoretical one, such as sustainability.. Anyone who wishes to participate to the debate is invited to register at <http://www.etsf.be/>.

## Notes for Editors

### ***Further information about the 28<sup>th</sup> of November***

- Programme and more information (including travel information), see <http://www.etsf.be/28november.html>
- To register: <http://www.etsf.be/281108/?text=register>

### ***Further information about the ETSF***

- For local enquiries, contact the press office from which you received this release.
- For more information about the ETSF, see <http://www.etsf.eu>.
- For more information about Nanoquanta, see <http://www.nanoquanta.eu/>.
- For information about the FP6 funding programme and the Network of Excellence 'instrument', see <http://www.cordis.lu/fp6/whatisfp6.htm>.
- For information about the FP7 funding programme, see [http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)
- For information about e-Infrastructures, see [http://cordis.europa.eu/fp7/ict/e-infrastructure/home\\_en.html](http://cordis.europa.eu/fp7/ict/e-infrastructure/home_en.html)

**President and Scientific Coordinator:** Professor Xavier Gonze, Université Catholique de Louvain, Louvain-la-Neuve, Belgium.

**Vice-President for Scientific Development:** Professor Angel Rubio, Universidad del País Vasco, San Sebastián, Spain.

**Vice-President for Users and Technology:** Dr Lucia Reining, Laboratoire des Solides Irradiés<sup>4</sup>, Palaiseau, France.

**Director of the ETSF Meeting Centre:** Professor Rodolfo Del Sole, Università di Roma Tor Vergata, Italy.

**Chair of the ETSF Steering Committee:** Professor Rex Godby, University of York, UK.