





ELI ERIC Iberian Information Day Part 2 – ELI ERIC a stakeholder of the European research area

Iberian knowledge in service of the European laser community

1 June 2022

Speakers and Moderators





Spain and its predecessors in the field of Research Infrastructures and e-Infrastructures. Currently, she is the Deputy Director General for Internationalisation of Science & Innovation and ESFRI Vice Chair.





Allen Weeks is the Director General of ELI ERIC (previously ELI-DC) since July 2018. He began working with research facilities in 2005 when he was involved in the construction project of the Free-Electron Laser 'FERMI' at Elettra in Trieste, Italy. From 2012-2017, he was the Head of Communications, External Relations, and In-Kind at the European Spallation Source (ESS) in Lund. He joined ELI in November 2017 to apply his experience in starting up a leading European research infrastructure and ERIC membership negotiations.







	Roman Hvězda has a mixed education background in engineering and economics from Czechia (Czech Technical University), Germany (RWTH Aachen) and Japan (Young leader program, National Graduate Institute for Policy Studies). He worked in Switzerland and Czechia in technology companies. He was involved in formulating educational and research policy at the Czech Ministry of Education, Youth and Sports from 2006 to 2010. He served at senior positions in the Ministry of Education, Youths and Sports. He has extensive experience in managerial and advisory positions, particularly with management of structural and development funds projects in the field of research and development. His professional interests include the topic of cooperation between research institutions and the private sector, knowledge and technology transfer and the management of large-scale research organizations. He has joined ELI Beamlines project in 2010. In 2014, Roman Hvezda was appointed ELI Beamlines Facility Director and Deputy Director of the Institute of Physics for ELI and HiLASE projects.
	Dimitris Charalambidis is Professor Emeritus of the Physics Department of the University of Crete, head of the attosecond S&T laboratory of FORTH-IESL in Heraklion, Crete and Chief Scientific Advisor of ELI-ALPS, Szeged, Hungary. He studied Physics at the University of Athens and did his doctoral dissertation at the Albert-Ludwigs University of Freiburg, Germany. Since 1987 he has been working at the University of Crete and at FORTH. His research interests focus on the fields of atomic and molecular physics, atto science, atoms and molecules in strong electromagnetic fields, coherent ultraviolet and X-ray sources, ultra-fast phenomena, and laser based diagnostic techniques. He has been a member of many international and national scientific policy making bodies. In addition, he has served on a number of research / training evaluation and management committees. He was and is actively involved in the preparation and implementation of Extreme Light Infrastructure (ELI).
	Luís O. Silva is Professor of Physics at Instituto Superior Técnico, University of Lisbon, since 2010, and a Visiting Professor in the Department of Physics at the University of Oxford since 2022. He obtained his degrees (Lic. 1992, PhD 1997 and Habilitation 2005) from IST, and was a post-doctoral researcher at the University of California Los Angeles from 1997 to 2001. His scientific contributions are focused in the in silico exploration of the interaction of intense beams of particles and lasers with plasmas, combining theoretical physics with massively parallel numerical simulations, in laboratory and astrophysical scenarios. He has been awarded several national and international awards and recognitions, including two ERC Advanced Grants, and election to Fellow of the American Physical Society, the EPS, the European Academy of Sciences, and to the Lisbon Academy of Sciences.







Luis Roso is the Founding Director of CLPU since September 2008, and promotor of its creation. He graduated in Physics and Mathematics in 1977 (simultaneously) at the Universitat de Barcelona, got a PhD in Physics at Universidad Autónoma de Barcelona in 1982. His thesis was on Saturation Laser Spectroscopy under the advice of Prof. Ramón Corbalán. He was Assistant Professor (tenure from 1984) at the Universidad Autónoma de Barcelona until 1991, visiting Scholar at the University of Rochester, Rochester, New York, in 1985/86, at the time where Chirped Pulse Amplification technology was developed. His interests on ultraintense lasers comes from those old times at Rochester. Luis was working in a theory team very close to G. Mourou's team with strong field photoionization simulations. Later (1991) he became Catedrático (Full Professor) at the Universidad de Salamanca, expert of the ESFRI European Commission in High Power Lasers (2004-2006)(see picture on the bottom), where ELI application was presented. Coordinator of the Spanish participation in ELI (Extreme Light Infrastructure) during the Preparatory Phase. Member of ICILS (International Committee on Intense Laser Science) since 2008.
Luca Volpe Is expert in Laser-plasma physics, extreme plasmas and laser- driven particle acceleration. He got the degree in 2004 in theoretical physics at the University of Milano Bicocca, then the PhD in 2008 with a thesis on Quantum Free Electron Laser at the University of Milano. After the PhD he worked in the group of Milano-Bicocca, at the CELIA laboratory in Bordeaux and in the ELI-ALPS laboratory in Szeged in the physics of High intensity laser-matter interaction. Since 2014 Luca hold the CLPU Laser- Plasma Chair at the University of Salamanca (USAL). He is responsible of the scientific research and Diagnostic-development program at CLPU as well as member of the Panel for User access at the VEGA system in CLPU. Luca is currently the (Elected) Chair of the Beam Plasma Inertial Confinement Fusion Board at the Plasma Physics division of the European Physical Society (EPS), the (Elected) Co-Chair of the Laserlab-Europe V Access Committee as well as the Spanish representer in the ER programme of EUROFusion program.
Roberto Trigo is Head of the Department of Large Installations and Dual Programs (this department is responsible for the management of technological returns derived from the participation of Spain in large scientific installations (CERN or ITER) and the promotion of I + D projects with Minisdef and the management of the new aeronautical technological program. He is a senior aeronautical engineer: motorcycle propulsion specialty, graduated in 1993, and has 24 years of laboratory experience in a variety of technological areas: thermofluidic dynamics, structures, telecommunications, thermal radiation, space and defense. He served as Head of infrared measuring laboratory at the Ministry of Defense 1995-2003; Head of the Spanish Area of the CDTI in 2008 to 2018 (at this time he was delegated to Spain in various international committees dealing with the European Economic Agency, including the Council);Chair of the Committee of European Space Advisers.







Erik Fernández is General Manager of INEUSTAR, the Spanish Science Industry Association. Erik is Telecommunications Engineer from the University of Navarra and holds a PhD in Telecommunications Engineering from the same university. During his career has held various positions in research Institutes, creating and leading research teams in the field of Non-destructive Testing of materials and being the Corporate Development Manager of CEIT. Nowadays, Erik is also an associate professor at the school of engineering of the University of Navarra.
Sergei Bulanov has received PhD degree in theoretical physics and astrophysics at Moscow Institute of Physics and Technology and the Dr. Sci. degree in plasma physics at Institute of General Physics of RAS. He worked at the Department of Theoretical Physics in Institute of Physics of RAS and in Institute of General Physics of RAS in Moscow. Then he has worked at Kansai Photon Science Institute-QST, Japan. Currently he is a department head at ELI-Beamlines in Czech Republic. He is also the Distinguished Research Fellow of QST in Japan. He has been engaged in the research on astrophysics, magnetic confinement plasma, laser radiation interaction with matter, and fundamental physics. S. V. Bulanov published more than 500 scientific papers with the citation index above 20000 (h=66). He is a recipient of the State Prise of the USSR, the Hannes Alfven Medal from European Physical Society, and The Order of Rising Sun awarded by Japan Emperor.
Gonçalo Figueira is assistant professor at the Physics Department of Instituto Superior Técnico, University of Lisbon, and a researcher at IPFN - Institute for Plasmas and Nuclear Fusion. He is a specialist in high power and ultrashort lasers based on CPA/OPCPA and is the head of the Laboratory for Intense Lasers (L2I). His research has been focused on on ultrabroadband amplification techniques and nonlinear media, ultrashort pulse management and characterization and spatio-temporal couplings. He has been a visiting researcher at the CLF/RAL, UK and at ICFO, Spain. He is the leader of the Laserlab-Portugal consortium (FCT National Roadmap), the largest laser research infrastructure in the country.
Giancarlo Gatti started his career in the Frascati National Laboratories (LNF) of INFN (Italy) since 2004 under the Sparc Lab project, formerly dedicated to advanced schemes for generation of high-brightness electron beams to be used as driver for Free Electron Lasers, Laser/plasma, beam/plasma interactions. Later in charge of the Laser service at LNF and the activities encompassing the High Intensity Laser Flame (electron and proton generation, advanced radiation sources). Since 2015 at CLPU, formerly as Senior Key Technologist on the VEGA Laser system, then from 2016 as Head of the Scientific Division. He has been fostering the kick-off of the VEGA experimental area, with internal activities and supporting the three competitive access campaigns taking place at the CLPU. The main efforts have been devoted to the development of secondary sources, focusing on the high repetition rate scenario and developing advanced diagnostics for secondary beams and Laser/plasma interactions.







Lorenzo Giuffrida obtained his PhD title in Physics at Messina University (Italy). In 2011 he moved to Bordeaux (France) at CELIA (Centre Laser Intenses et Applications) for a 3 years Post-Doc position paid by the CNRS (Centre National de la Recherche Scientifique). In 2014, he moved at the FZU-ASCR (Institute of Physics of the Czech Academy of Sciences) in Prague within the ELI-Beamlines pan-European facility. Currently he is the Deputy Head of the Department of Ion Acceleration and Applications of High Energy Particles working in ion acceleration driven by ultra-high-intense lasers. He is the responsible to develop advanced devices for the ELIMAIA user beamline, for testing advanced targets useful for modulating laser-driven ion beams and for carrying out experimental research activities on laser-driven nuclear reaction. He is currently leading the Commissioning of the Laser-Plasma Ion accelerator at the ELIMAIA user beamline.
Zsolt Fülöp is a researcher, Ph.D. in physics, main research topic is nuclear astrophysics. Publication list is available at https://publons.com/researcher/2889845/zsolt-fulop/. He organized several conferences in Hungary, among them the 'Nuclei in the Cosmos' the largest nuclear astrophysics event in 2014 and the Science on Stage in 2017, a pan-European event for science teachers. Former chair of the Nuclear Physics Division of the European Physical Society (EPS). Member of Academia Europaea. Chair of the Hungarian National Research Infrastructure Committee. Hungarian envoy for the coordination of the ELI consortium.
Marta Fajardo holds a PhD from the Ecole Polytechnique & Instituto Superior Técnico (2001) and is Assistant Professor/Assistant Researcher at the Department of Physics of Instituto Superior Técnico (IST). After her PhD in Plasma Atomic Physics at IST and Ecole Polytechnique in 2001, she was a post-doc at CNRS in France where she studied X-ray lasers and their applications. Her research is focused on the development and use of Ultra- bright X-ray sources such as X-ray Free Electron Lasers, Plasma-based X-ray lasers and High Harmonic Generation. She uses these sources to study Matter in Extreme Conditions such as High Energy Density Plasmas. For these studies she has developed new diagnostics in X-ray Imaging such as X-ray holography, Coherent Diffraction Imaging and 3D imaging, using her team's know-how in X-ray Metrology. She has been an active member of the Beam, Plasmas and Inertial Fusion (BPIF) Community for many years, being the Chair of the BPIF Section of the European Physical Society - Division of Plasma Physics in 2017- 2020.

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José Miguel Mateos holds a PhD in Physical Sciences from the University of Salamanca. He is a member of the Group Thermodynamic and Statistical Physics in the Area of Applied Physics for the Department of Applied Physics and the Fundamental Physics and Mathematics Institute. His research activity has involved Non Equilibrium Statistical Physics and Thermodynamic, and in the present moment is centred in the line of Thermodynamic Optimization of Energy Converters. He is member of the research unit specialized in Energy Optimization, Thermodynamics and Statistical Physics. He has published about sixty peer-reviewed articles in international journals and reviewed for international journals in the field of Statistical Physics Thermodynamics and Energy Conversion. He has been member of more than twenty R&D projects funded through competitive calls of public or private entities. He has taught courses at the University of Salamanca for Bachelors Degree in Physics, Chemical Engineering and Environmental Science, Master Degree in Physics and in Agronomic Engineering, and PhD Programs in Physics. He has participated in about twenty innovative teaching projects and has led one third of them. He has held various academic management positions at the Faculty of Science of the University of Salamanca such as director of the Bachelor Degree in Physics, Master Degree in Physics, Vice Dean of Relationships with Companies and Dean of the Faculty of Science. From May 2021 up to present date he holds the position of Vice Chancellor of Research and Knowledge Transfer the University of Salamanca.



Dušan Chorvát is the Deputy Director and Head of the Laboratory of Laser Microscopy and Spectroscopy of the International Laser Center, Bratislava, Slovak Republic. He holds an MA in Biophysics and Chemical Physics and a Ph.D. in Biophysics from the Comenius University in Bratislava. His research interest are in fluorescence spectroscopy and imaging of endogenous fluorophores in living cells, physical chemistry of photoactive molecules studied by time-resolved spectroscopy, application of multi-spectral imaging methods in cellular physiology and biophysics and development of techniques for 2-photon photopolymerization, studies of polymer complexes and their interacion with isolated cells using optical methods, characterization and optimization of biomaterials and biosensors. He has been a member of Laserlab Europe since 2008 (currently head of Networking board), Vicepresident of Czecho-Slovak Microscopy Society (member since 2005), Member of Biophysical Society (2003-2009), Slovak Biophysical Society (since 2002), Slovak Physical Society (since 2009) and has published 105 CC-papers.

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Michael Vích studied PR and communication at University of New South Wales in Sydney Australia and Social education and school management at Charles University in Prague, Czech Republic. He started his carrier as a teacher at several secondary schools in Prague. Between 2006 - 2008 he was principal of Secondary school of international relations and PR in Prague, during 2008 – 2012 he was PR manager for Pears Health Cyber in Prague, responsible for the external communication and CSR. Michael Vích has been a PR manager at ELI Beamlines facility since 2012. He is responsible for internal, external communication, popularization of science and educational events and many more in ELI Beamlines.

Mauricio Rico graduated in Physics at Universidad Autónoma de Madrid (UAM). He moved to Max-Planck-Institut für Mikrostrukturphysik in Halle (Germany) as Marie Curie Post-doctoral fellow, and Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie in Berlin (Germany) before returning to Instituto de Ciencia de Materiales de Madrid – CSIC. Since 2011, he leads as coordinator and manages laser industrial projects and transfer technology at CLPU. Research activities focus on development new laser sources, laser diagnostic, laser applications, ultrafast laser microprocesing materials, targetry and proton and electron acceleration in laser-driven applications.



Aleš Hála is the Head of Technology Transfer and Industrial Liaison Office at ELI Beamlines. Since 2012, he has been supporting with his team the technology transfer of research results into industry and development of industrial partnerships. He has an educational background in regional development, economics, and electrical engineering. His professional education also includes the protection of industrial rights at Industrial Property Training Institute in Prague. Before joining ELI Beamlines, he engaged in promoting the Czech Republic as a destination for foreign direct investments in microelectronics and semiconductor manufacturing and design, represented the Business and Development of Czech start-up companies as the Head of the Czech Technology Accelerator Project.



Dávid Bereczkei graduated from the Corvinus University (Budapest, Hungary) as an Expert on international relations (major) and European studies (minor), studied at the Nottingham Trent University and finished his MBA studies at the Technical University of Budapest in 2019. He has been involved with EU-funded projects since 2008, first at the National Development Agency and later at the Prime Minister's Office. He joined ELI-ALPS in 2013 as a project management coordinator.







Rapporteurs

	Antonia Morabito is currently working at CLPU (Salamanca, Spain) as scientist for the package WP7 of the IMPULSE project. Before joining CLPU, she worked as early stage researcher at Extreme Light Infrastructure- Atto second Light sources (ELI-ALPS) research center, Szeged (Hungary). In April 2021, she obtained a PhD degree in Accelerator Physics at the University la Sapienza di Roma (Italy) with the support of ELI-ALPS. Her research interests are mainly focused on laser-plasma based proton acceleration. She is dealing with transport and manipulation of laser driven proton beams for diagnostics and applications. In detail, her thesis work was divided in two main parts: one related to the theoretical study of a novel Thomson parabola spectrometer design for laser ion diagnostics and one related to the design and optimization of laser-PIXE beamline for material science application.
	Alexandra Schmidli studied Political Science and Philosophy and started working for an integrated PR agency implementing communications campaigns for European Commission projects from 2010-2013. Following this, she worked as a Communications Officer for 5 years at the European Spallation Source (ESS) ERIC supporting with external communications and coordinating the partner and stakeholder relations within the framework of the BrightnESS project. In 2018 she pursued a Masters Degree from the Humboldt Universität zu Berlin in Global Studies with a focus on social movements and public engagement. She joined ELI ERIC in 2021 as the Work Package 7 Leader for the IMPULSE project and Senior Communications Officer at ELI ERIC.
the second secon	Nad'a Witzanyová is SO for International Affairs at ELI ERIC. At the Ministry of Education, Youth and Sport, she was dealing with ERA related initiatives (ERAC, SGHRM), CZ PRES 2009 (adoption of the ERIC regulation) and setting up of Czech RIs system. Also involved in ESFRI activities, ESFRI EB, Chair of ESFRI Regional Issues, and Evaluation WGRs. Initiated and coordinated drafting of several CZ Roadmaps for large RIs and their implementation. Later she was dealing with energy policy (European Energy Research Alliance), set up a Grant and TTO offices at a private energy research organisation. Proposed and managed large structural funds projects (e.g. CZ in-kind contribution to ESS Scandinavia or FAIR GmbH). She has been delegate of the H2020 and HE Programme Committee for RIs and worked as expert for the EC (e.g. EGERIC group). Her background is in macromolecular chemistry and has a LL.B. in research law.









ESFRI European Commission in High Power Lasers (2004-2006), where ELI application was presented. Luis Roso is 4th from left in the top row.