Sylvie **DEPIERREUX**

Born May 3rd, 1972, France
CEA, DAM, DIF, F-91297 Arpajon, FRANCE
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email : sylvie.depierreux@polytechnique.edu/sylvie.depierreux@cea.fr

Professional experience :

since 2000 : researcher at CEA in the field of laser driven Inertial Confinement Fusion-conducting experiments on laser facilities in France (Laser Mégajoule, LIL, LULI) and in USA (Omega/Omega EP)

since 2014: teacher (laser plasma interaction courses) in master « Physique des plasmas et de la Fusion »

2006-2014 : teacher (laser plasma interaction courses) in master « Sciences de la Fusion »

2004-2010 : teacher (courses on the physics of laser) in master « Physique et Technologie des Grands Instruments »

1997-2000 : PhD thesis at the Laboratoire pour l'Utilisation des Laser Intenses (LULI, Ecole Polytechnique)

Cursus :

1997–2000	Doctorat de l'Ecole Polytechnique
1993–1997	Elève de l'Ecole Normale Supérieure de Cachan (*ENS Cachan*, 94235 Cachan cedex)
1996–1997	DEA de Physique et technologie des Grands Instruments
1996	Agrégation de Physique option Physique Appliquée Rang : 1ère
1993–1995	Licence et Maîtrise EEA (Electronique, Electrotechnique, Automatique) *ENS Cachan, université Paris XI*

Publications : 44 scientific publications (16 published in Phys. Rev. Lett.)

- "Experimental Investigation of the Collective Raman Scattering of Multiple Laser Beams in Inhomogeneous Plasmas", **Phys. Rev. Lett. 117** 235002 (2016), **S. Depierreux**, C. Neuville, C. Baccou, V. Tassin, M. Casanova, P.-E. Masson-Laborde, N. Borisenko, A. Orekhov, A. Colaitis, A. Debayle, G. Duchateau, A. Heron, S. Huller, P. Loiseau, P. Nicolaï, D. Pesme, C. Riconda, G. Tran, R. Bahr, J. Katz, C. Stoeckl, W. Seka, V. Tikhonchuk, and C. Labaune;

- "Experimental Evidence of the Collective Brillouin Scattering of Multiple Laser Beams Sharing Acoustic Waves", **Phys. Rev. Lett. 116** 235002 (2016), C. Neuville, V. Tassin, D. Pesme, M.-C. Monteil, P.-E. Masson-Laborde, C. Baccou, P. Fremerye, F. Philippe, P. Seytor, D. Teychenné, W. Seka, J. Katz, R. Bahr, and **S. Depierreux** ;

- "Laser light triggers increased Raman amplification in the regime of nonlinear Landau damping.", **Depierreux, S**. et al. **Nat. Commun**. 5:4158 doi: 10.1038/ncomms5158 (2014);

- "Fusion reactions initiated by laser-accelerated particle beams in a laser - produced plasma", C. Labaune, C. Baccou, **S. Depierreux**, *et al.*, **Nature Comm**. 4, 2506doi:10.1038/ncomms3506.

Main missions of expertise :

- Coordinator of the ANR project ILPHYGERIE (ANR-12-BS04-0006-01) (2012-2016)
- Referee for Physical Review Letters/Physics of Plasmas/Plasma Physics and Controlled Fusion
- Referee of scientific research projects for the US DOE and the Canadian Research Council

Motivations for joining the BPIF board of the EPS-DPP :

- interested by the EPS-DPP conference for the diversity of the subjects
- promote the activities of the BPIF section among the Inertial Confinement Fusion (ICF) community in France, Europe and USA.
- contribute in the organization of workshops around the physics of Laser Plasma Interaction and ICF at the European/ International level

Curriculum Vitae - Dr Francisco SUZUKI-VIDAL

https://www.imperial.ac.uk/people/f.suzuki (for full CV and publication list)

Research Fellow, Imperial College London, UK
Blackett Laboratory, room 740
Prince Consort Road
London SW7 2BW, UK
Phone: +44 (0) 20 759 47651
E-mail: f.suzuki@imperial.ac.uk

Motivation to join the Board of the EPS-PPD BP&IF section: I have been building up a career in plasma physics over the past 15 years, where I have been involved in different aspects of research, administration and outreach, particularly through collaborations with researchers in Europe and worldwide, which has given me a broad scope of the field. Thus, I am very enthusiastic about the prospect of joining and contributing to the EPS-PDD BP&IF section.

Education

2009 PhD in Plasma Physics, University of London, Imperial College London, UK
2004 BSc in Physics, Pontificia Universidad Catolica de Chile (PUC), Chile

Research and professional experience

2013 – Present Royal Society University Research Fellow (URF), Imperial College London
2009 – 2013 Research Associate, Imperial College London
2005 – 2009 Research Assistant, Imperial College London
2004 – 2005 Research Assistant, PUC, Chile

Awards and research achievements

- **11 invited talks** at international conferences since 2010 (e.g. ICHED, EPS, HPLSE, HEDLA, Institute of Physics UK, DZP)
- **Award for Excellence in teaching**, Faculty of Natural Sciences, Imperial College London (2015)
- **Fusion Science Center Award**, Excellence in poster presentation, HEDP Summer School, UCSD La Jolla, CA, USA (2007)
- **Principal Investigator** on laser experiments at Orion (UK) and SG-II (China), co-PI at PALS (CZ).
- **Lead on HED experiments** on the MAGPIE pulsed-power facility, Imperial College London, UK.

Synergistic activities

- **Committees:** Local organising committee for IoP Plasma Group Conference 2020 and 2014.
- Post-doctoral representative for plasma physics on the research associate committee in 2011.
- **Topical Editor:** High-Power Laser Science and Engineering journal, Cambridge University Press. Special
- issue on laboratory-astrophysics (2017-2018).
- **Group coordinator:** Organizer of plasma PG lectures (current). Responsible for the Undergraduate Research Opportunities Programme (UROP) in the plasma group (2014-2017). Organizer of postgraduate seminar series in the plasma group (2014-2017).
- **Health and safety coordinator** in the MAGPIE laboratory (since 2010).
- **Memberships:** Member of the Institute of Physics UK (IoP), the American Physical Society (APS) and Fellow of the Royal Astronomical Society UK (RAS).

Teaching

- **Head of Experiment**, 2nd year undergraduate physics laboratory (current).
- **PhD student direct supervisor** (2014-2018) and **co-supervisor** (2015-2018).
- **Masters project co-supervisor** (8 students in 4 separate projects, 2010-2014).
- **Undergraduate project direct supervisor**, UROP summer projects (2014, 2015, 2019).
- **Lecturer** on 'Astrophysical jets', 'Fluid basics', Z-pinches for ICF', 'Presentation skills'.

Publications

- **First author** of 13 papers, **co-author** of 64 papers since 2005. Over 1300 citations (h-index = 21, i10-index = 35).

CV Maslov Vasyl

First name: **Vasyl**
Surname: **Maslov**
Institute: NSC Khakov Institute of Physics and Technology (Kharkov, Ukraine).
e-mail: vimaslov1955@gmail.com or vmaslov@kipt.kharkov.ua
member of Ukrainian Physical Society
Member of the Scientific Council "Plasma Physics and Plasma Electronics" of the National Academy of Sciences of Ukraine

I. **Personal data**: Date of birth: 13th January, 1955. Fax: 057 3351688, tel: +38 057 7023898 or +38 095 2168332
Address: apt. 132, b. 1, Shatilovskaya str., 61166 Kharkov, Ukraine

II. **Academic degrees**: 1989 Ph.D., Plasma Physics; 1999 Dr.Sc., Plasma Physics; 2003 Professor, Kharkov State University.

III. **Uuniversity education** : 1973 - 1979 Kharkov State University, Kharkov.

IV. **Professional background**: 1979 1981 Research Assistant, 1981 1986 Research Associate, 1986 1989 Research Scientist, 1989 2003 Senior Research Scientist, 2003 2020 Leading Research Scientist, NSC Kharkov Institute of Physics and Technology, 2019 2020 Deputy Head of Theoretical Department;
1994 1999 Associate Professor, 2000 2020 Professor, V.N. Karazin Kharkov National University, Kharkov.

V. **Int. Seminars and conferences**: 1992 Inv. Paper on 4th Symp. on Double Layers (Innsbruck); 1992, 3 months, Bayreuth University, Germany, (scien. collab.); 1994 Mineapolis, papers on 36th Meeting of DPP; 1995, 1.5 months, Bayreuth Univ., (scien. collab.); 1995, Louisville, oral paper on 37th Meeting of DPP; 1996, 1 month, Bayreuth Univ., (scien. collab.); 1998, Toki, Japan, papers on Conf. on Plasma Phys.; 1998 Japan, Inv. Paper on seminar in Shizuoka Univ.; 2000 Vienna, papers on 25th Conf. on Particle Accelerators; 2000, Triest, Italy, papers on Conf. on Colloidal Plasma; 2000 oral in Bayreuth Univ.; 2000 papers on Toki Conf. on Plasma Phys.; 2000 oral on seminar in Tokyo Inst. of Techn.; 2000 oral on seminar in Kyushu Univ.; 2000 oral on seminar in Tokyo Metropolitan Inst. of Techn.; 2001, Nagoya, papers on Int. Conf. on Phenomena in Ionized Gases; 2001 oral on seminar in Kyushu Univ.; 2001 oral on seminar in Tokyo Ins. of Technology; 2002, Osaka, paper on 1st IWIC- PIC; 2002, Gifu, Japan, papers on 15th Int. Conf. on Plasma Surface Interactions in Controlled Fusion; 2002 oral on seminar in Sendai Univ.; 2005, Triest, Italy, papers on the 2nd IAEA Techn. Meeting on the Theory of Plasma Inst.; 2006, 3 months, Turin, Italy, (scien. collab.); 2006, Como, Italy, Inv. Paper on Int. Workshop; 2007 oral on Joint Conf. of 17th Int. Toki Conf.; 2007 oral on Seminar in Tokyo Inst. of Techn.; 2008, Cairo, Inv. Paper on 1st NILES Workshop on Lasers and Plasmas; 2009, Turin, Italy, papers on 11th Easter Meeting on Reconnection and Turb. in Magnetically Confined Plas.; 2009, Como, Italy, Inv. Paper on Int. Symp. "Plasmas in the Lab. and in the Universe"; 2009 papers on 19th Int. Toki Conf.; 2009 oral on Seminar in Tokyo Inst. of Techn.; 2010 papers on 20th Int. Toki Conf.; 2014, Frascati, oral on seminar in SPARC_LAB, INFN-LNF; 2015 France, oral on seminar in Centre Lasers Intenses et Applications, Universite Bordeaux; 2015 France, oral on seminar in LAL Laboratory of Scientific Centre of Orsay, Univ. Paris-Sud; 2015 oral on French-Ukr. Workshop on Instrumentation Developments for High Energy Physics in LAL Lab. of Scientific Centre of Orsay, Paris Sud Univ.; 2016 England, oral lecture on seminar in John Adams Inst. (JAI), Oxford Univ.; 2019 Orsay, France, Inv. Paper on franco-ukrainien Workshop.

VI. **International Grants**: 1996-1998 Int. STCU Contract # 298; 2000-2002 Int. STCU Contract #1596; 2001-2004 Int. STCU Contract #959; 2006-2008 Int. STCU Contract #3368; 2012-2014 Int. STCU Contract #P522; 2015-2017 Int. STCU Contract #6059; 2016-2017 Manager of Int. Partner Contract #P687; 2017-2018 Manager of the Int. Partner Contract #P687b; 2019-2020 Int. EUROfusion Contract # ENR-IFE19.CEA-01 633053.

VII. **Scientific interests**: inertial fusion, ion acceleration at laser pulse interaction with foil, wakefield excitation in plasma by train of relativistic electron bunches and by laser pulses, plasma sources of extreme ultraviolet, plasma lenses for focusing of ion and electron beams, plasma sources, coherent wave structures (double layers, solitons, vortices, etc.) in nonequilibrium plasmas, dusty plasma, coherence in wave turbulence, description of time evolution of nonlinear phenomena in nonequilibrium plasma, plasma crystals, modulation instability on electron and ion time scales, modification of materials by electromagnetic radiation and by plasma, beam-plasma discharge, ion sources, transport barrier formation in nuclear fusion, separator for extraction of drops from plasma, ICP plasma source, mass-separator.

VIII. Number of publications: 431. **5 major publications**:

1. V.I.Maslov, F.Porcelli. Shear Formation by Poloidal Chain of Magnetic Islands. Plasma and Fusion Research. 3 (2008) S1012.
2. K.V.Lotov, V.I.Maslov et al. Resonant excitation of plasma wakefields by a nonresonant train of short electron bunches. Plasma Phys. Control. Fusion 52 N6 (2010) 065009.
3. V.I.Maslov et al. Excitation and properties of large amplitude soliton near foil at laser pulse interaction with it. Problems of Atomic Science and Technology, 1 (2012) 324.
4. Ie.V. Borgun, N.A. Azarenkov, A. Hassanein, A.F. Tseluyko, V.I. Maslov, D.L. Ryabchikov. Double layer influence on dynamic of the EUV radiation from plasma of high-current pulse diode in the tin vapour. Physics Letters A. 377 (2013) 307.
5. V. I. Maslov et al. Dynamics of Electron Bunches at the Laser-Plasma Interaction in the Bubble Regime. Nuclear Instruments and Methods in Physics Research A. 829 (2016) 422 - 425.

IX. **My motivation for joining the Board**

I would like in collaboration with Ukrainian Physical Society and laboratories to participate in preparation and conduction of the annual European Plasma Physics conferences, in coordination of topical conferences and workshops across the Europe and in promotion of collaboration research between the partners and in nomination for prizes.

h-index: 11.

Laurent GREMILLET
Senior staff physicist
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I have a long track record in theoretical and computational modelling of the kinetics of intense laser-plasma and beam-plasma interactions, with prime interest in plasma instabilities, laser-driven particle acceleration, fast electron transport, laboratory astrophysics, and high-field physics.

I will be most honoured to be a member of the Beam Plasma & Inertial Fusion section of the Plasma Physics Division of the European Physical Society. I will be eager to contribute to the annual EPS-DPP conference, which I regularly attend, as well as to the selection of prize laureates and the promotion, through various events, of the topics covered by the BPIF Section across Europe and beyond. In this regard, the impending coming into operation of the multi-petawatt ELI and Apollon facilities makes for a particularly exciting environment, bound to foster novel multidisciplinary research. I believe that my broad knowledge of plasma physics and of the related European research community give me the skills suitable for the tasks carried out by the BPIF Board of the EPS-DPP.

Academic background

1991-1994 École Polytechnique (engineering school, Palaiseau, France).

1994-1997 École Nationale des Ponts et Chaussées (engineering school, Paris, France). MSc in laser-matter interactions.

1997-2001 LULI, École Polytechnique. PhD in laser-plasma physics: *Numerical and experimental study of fast electron transport in ultra-high-intensity laser-solid interaction*. Supervisor: F. Amiranoff. This work was awarded the 2002 Plasma Prize of the French Physical Society.

Scientific production

- 138 articles in peer-reviewed journals (including 17 Phys. Rev. Lett.).
- 1800 citing articles, h-index: 30 (ref. Web of Science).
- 17 invited talks in international conferences.

Selected recent publications

B. Martinez, M. Lobet, E. d'Humières, and L. Gremillet, *High-energy radiation and pair production by Coulomb processes in particle-in-cell simulations*, Phys. Plasmas **26**, 103109 (2019).

M. Lemoine, L. Gremillet, G. Pelletier, and A. Vanthieghem, *Physics of relativistic collisionless Weibel-mediated shocks*, Phys. Rev. Lett. **123**, 035101 (2019).

B. Martinez, E. d'Humières, and L. Gremillet, *Synchrotron emission from nanowire-array targets irradiated by ultraintense laser pulses*, Plasma Phys. Control. Fusion **7**, 074009 (2018).

A. Vanthieghem, M. Lemoine, and L. Gremillet, *Stability analysis of a periodic system of relativistic current filaments*, Phys. Plasmas **25**, 072115 (2018).

M. Lobet. X. Davoine, E. d'Humières, and L. Gremillet, *Generation of high-energy electron-positron pairs in the collision of a laser-accelerated electron beam with a multipetawatt laser*, Phys. Rev. Accel. Beams **20**, 043401 (2017).

C. Ruyer, L. Gremillet, G. Bonnaud, and C. Riconda, *Analytical predictions of field and plasma dynamics during nonlinear Weibel-mediated flow collisions*, Phys. Rev. Lett. **117**, 065001 (2016).

C. Rousseaux, K. Glize, S.D. Baton, L. Lancia, D. Bénisti, and L. Gremillet, *Experimental evidence of backward Raman scattering driven cooperatively by two picosecond laser pulses propagating side by side*, Phys. Rev. Lett. **116**, 015002 (2016).

M. Lobet, C. Ruyer, A. Debayle, E. d'Humières, M. Grech, M. Lemoine, and L. Gremillet, *Ultrafast synchrotron-enhanced thermalization of laser-driven colliding pair plasmas*, Phys. Rev. Lett. **115**, 215003 (2015).

Teaching

2004-2020 MSc courses in computational plasma physics and laser-plasma physics (Université Paris-Saclay).

Mentoring

- 9 PhD students: M. Drouin (2006-2009), F. Pérez (2007-2010), C. Ruyer (2011-2014), M. Lobet (2012-2015), B. Martinez (2015-2018), A. Vanthieghem (2016-2019), D. Tordeux (2018-2021), V. Ospina (2019-2022), V. Bresci (2019-2022).
- 3 postdocs: C. Cornet (2010-2012), A. Debayle (2012-2014), G. Sary (2016-2018).
- 20 PhD committees: A. Lévy (2008), M. Drouin (2009), F. Pérez (2010), H. Vincenti (2011), R. Capdessus (2012), E. Perez-Alvaro (2014), C. Ruyer (2014), M. Touati (2015), M. Lobet (2015), G. Sary (2016), M. Thévenet (2016), A. Stahl (2017), J. Moreau (2018), F. Niel (2018), B. Martinez (2018), Q. Moreno (2018), L. Chopineau (2019), A. Vanthieghem (2019), J. Déchard (2019), J. Magnusson (2019).

Other activities

2012-2020 Member of the Board of the Plasma Division of the French Physical Society (SFP).

2016-2020 Member of the evaluation committee of GENCI (French high-performance-computing funding agency).

Justin Wark, University of Oxford, UK

Background

I started my Physics career as an undergraduate at Oxford, before undertaking a PhD in Plasma Physics at Imperial College, London. That graduate work was a study of the Rayleigh Taylor instability, of relevance to Inertial Confinement Fusion (ICF) - an interest that has remained life-long. From there I moved to the University of Rochester in upstate New York, before returning to Oxford in 1988 to set up a research group working in high power laser-plasma interactions. I have a range experience of various scientific committees, including contributing to, amongst many others, the Science Advisory Council for LCLS, the Peer Review Panel for NIF, and various UK funding agencies. I am a member of the UK Institute of Physics, EPS, and a Fellow of APS, and received the Dawson Award for Excellence in Plasma Physics in 2015.

Research Interests

My research interests lie in the theory, creation, and diagnosis of matter under extremes of temperature, density and pressure – conditions that are far beyond those found on earth, and only exist at the centre of the giant planets within our own solar system and beyond, or towards the centre of stars. The work is both of a fundamental nature, and of relevance to inertial confinement fusion, and exoplanet research. Along with my research group I use the largest and most powerful optical and x-ray lasers in Europe and the US to perform these experiments. As well as experiments of relevance to ICF and shock physics, most recently I have been leading the UK portion of the HIBEF consortium (the Helmholtz International Beamline for Extreme Fields) at the European XFEL, which is a revolutionary new facility which will greatly enhance our capabilities to create and diagnose dense plasma systems. An overall indication of my research interests can be gleaned from my google scholar page: https://scholar.google.co.uk/citations?user=6zmwGSYAAAAJ&hl=en

Motivations for joining the Board

It is my view that whole new areas of plasma physics are going to open up over the next few years with the recent commissioning of the High Energy Density Science end station at XFEL. This facility will combine an x-ray source, which is spectrally brighter than any synchrotron by a factor of a billion, with high power, high repetition rate, optical lasers, both nanosecond and sub-picosecond. Research in plasma physics using such systems will open up whole new areas of relevance to the BPIF portfolio, and I would like to see the research emanating from these new facilities promoted alongside ICF and laser-plasma interactions in general within the EPS as a whole. In addition to spreading the word about exciting new science opportunities, I would like to learn from, and contribute to, the European BPIF community in addressing the issues of graduate teaching in Universities in the area of dense plasmas, and, given this is a specialist area, how we might do this more effectively. Recent interactions between Europe and the US have indicated that there may be great benefits from such collaborations, and I am hoping that the board might be able to catalyse further initiatives across Europe.

CURRICULUM VITAE

Prof. Dr. rer. nat. Malte Christoph Kaluza
Friedrich-Schiller-University Jena,
Institute of Optics and Quantum Electronics,
Max-Wien-Platz 1, 07743 Jena, Germany
Tel.: +49–3641–947280, Fax: +49–3641–947282,
Email: Malte.Kaluza@uni-jena.de

• PERSONAL INFORMATION

Family name, First names:	Kaluza, Malte Christoph
Date and place of birth:	April 5th 1974 in Lich/Hessen (Germany)
Citizenship:	German
URL for web site:	https://www.physik.uni-jena.de/ioq.html

• EDUCATION

2004 **PhD in Physics** (27th July 2004): "summa cum laude"
Department of Physics, Technical University of Munich, Germany and Max-Planck-Institute for Quantum Optics, Garching, Germany, Thesis: *Characterisation of laser-accelerated proton beams*, supervisors: Prof. Dr. J. Meyer-ter-Vehn, Prof. Dr. K. J. Witte

2000 **Diploma in Physics** (5-year degree, equiv. to M.Sc.): "with distinction", **final grade: 1.1**
Department of Physics, Technical University of Munich, Germany and Max-Planck-Institute for Quantum Optics, Garching, Germany, Diploma thesis: *Ionization of high-Z-atoms in strong laser fields* (in German), supervisor: Prof. Dr. J. Meyer-ter-Vehn

2000 **Masterclass-Diploma in Music,** Hochschule für Musik in München

1998 **Diploma in Music** (main instrument: violoncello), **final grade: 1.34**

1993 **Abitur** (university entrance qualification), **final grade: 1.0**

• CURRENT POSITION

Since 2016 **Director** of the Institute of Optics and Quantum Electronics at the Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany

Since 2011 **Chair** (W3-professorship) for Experimental Physics/Relativistic Laser Physics at the Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany

2011 **Call** for W2-professorship at the Technical University Berlin and at the Max-Born-Institute Berlin, Germany

2011 **2nd position on nomination list** for W3-professorship at the University of Frankfurt and at the GSI Helmholtz Center for Heavy-Ion Research in Darmstadt, Germany

• PREVIOUS POSITIONS

2006 – 2011 **Junior Professor** for Experimental Physics/Ultra Photonics at the Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany

2004 – 2005 **Research Associate** in the Plasma Physics Group, Imperial College London, UK

2000 – 2004 **Scientific Assistant** at Max-Planck-Institute for Quantum Optics, Garching, Germany

1998 – 2000 **Student Assistant** at Faculty of Mathematics, Technical University Munich, Germany

• FELLOWSHIPS/SCHOLARSHIPS AND AWARDS

2014 Special award from "Ideenwettbewerb Jena-Weimar 2014" (≈ "Ideas competition") for the development of novel laser materials suitable for high-power laser systems

2008 Award "Ausgezeichneter Ort im Land der Ideen (≈ Distinguished place in the land of ideas)" under of the patronage of the Bundespräsident of Germany for Malte C. Kaluza's research group and the laser system POLARIS

2001 – 2004 Scholarship from "e-fellows.net", Germany

1998 Scholarship from the Hochschule für Musik in München, Germany

1995 – 1998 Scholarship from the "Studienstiftung des Deutschen Volkes", Germany

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2006 – 2020 11 Postdocs, 21 PhD-students (14 finished, 5 of them achieved "summa cum laude"), 32 Bachelor-/Master-/Diploma-students (25 finished) at the Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany

- **TEACHING ACTIVITIES**

Since 2006 Lecture courses and seminars in Experimental Physics I (given 14x) & Experimental Physics II (5x), Laser Physics (1x), Plasma Physics (9x), Laser-Plasma Physics (13x)
2004 – 2005 Demonstrator of 3rd year laboratory and laboratory projects at Imperial College London

- **ORGANISATION OF SCIENTIFIC MEETINGS**

2020 Member of program committee of 48th EPS-conference on plasma physics, Rhodes, Greece
2018 Member of scientific advisory committee of Satellite to ICPEAC 2019
2015 Member of scientific advisory committee of NLIGHT15-workshop, Dresden, Germany
2015 Member of scientific advisory committee of 2nd EAAC-conference, Elba, Italy
2011 Member of program committee of 38th EPS-conference on plasma physics, Strasbourg, France
2010 Member of program committee of SPIE Photonics Europe, Brussels, Belgium

- **INSTITUTIONAL RESPONSIBILITIES**

Since 2016 Member of the Senate of the Friedrich-Schiller-University Jena, Germany
Since 2010 Member of the Examination Board of the Faculty of Physics and Astronomy, FSU Jena
Since 2010 Member of the Extended Board of Directors of the Helmholtz-Institute Jena, Germany
Since 2009 Erasmus coordinator of the Faculty of Physics and Astronomy, FSU Jena
2008-2016 Member of the Faculty Board of the Faculty of Physics and Astronomy, FSU Jena

- **COMMISSIONS OF TRUST**

Since 2018 Member of the Access Committee for the laser system VEGA at CLPU, Salamanca
Since 2018 Member of the Editorial Board of the peer-reviewed journal "Methods and Protocols"
2015-2019 Member of the Advisory Board for the program "Matter and Technology" at the Karlsruhe Institute of Technology (KIT)
Since 2015 Member of the Editorial Board of the peer-reviewed journal "Applied Sciences"
Since 2014 Reviewer for the Humboldt Foundation, Germany
Since 2010 External reviewer for PhD and habilitation defenses, e.g. at Oxford University, LMU Munich, TU Dresden, ETH Zürich, Lund University, University of Frankfurt
Since 2009 Reviewer for the German Science Foundation (DFG), Germany
Since 2005 Reviewer for scientific journals: Nature, Nature Physics, Nature Photonics, Nature Communications, Physical Review Letters, Physical Review E, Optics Letters, Optics Express, Physics of Plasmas, Applied Physics Letters, New Journal of Physics,…

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

Since 2000 Member of the German Physical Society (DFG)
Since 2005 Member of the American Physical Society (APS)

- **RESEARCH PROJECTS**
  - Laser-driven particle acceleration using high-power lasers in Germany, France, Sweden, and UK
  - Development and use of novel, high-resolution plasma diagnostics
  - Development of diode-pumped, high-power laser systems (e.g. POLARIS), burst-mode laser systems, mid-IR laser systems
  - Characterization and application of novel laser-materials for diode pumping

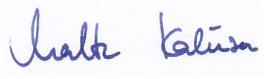
- **RECORD OF PUBLICATIONS AND CONFERENCE PRESENTATIONS**

Malte Kaluza is currently author of **140 articles** published in major international peer-reviewed journals. Among them are 6 articles in the Nature family and 20 in Physical Review. So far, his work has been **cited more than 3600 times**. His current **h-index is 32** (web of science, January 2020). Over the last 10 years, Malte Kaluza, was invited to **give more than 60 invited and plenary talks** at major national and international conferences such as "Frontiers in Optics", "DPG Spring Conference", "EPS-conference on plasma physics", "Advanced Accelerator Concepts", "ECLIM", "ICPEAC", and others.

- **MOTIVATION TO SERVE ON BPIF BOARD OF PLASMA PHYSICS DIVISION OF EPS**

I would try to help increase the visibility of laser-generated plasmas as a source for ultra-short particle pulses or other applications – both within Europe and worldwide. In particular, I would suggest to bring together the plasma-accelerator community with the conventional accelerator side. This could be realized e.g. through satellite meetings (in connection to the annual EPS conferences) on specific, timely subjects to which scientists from both fields could be invited, potentially initiating fruitful future collaborations and research programs.

Jena, January 22nd 2020



CURRICULUM VITAE
Andrey V. BRANTOV

General Information
Name: Brantov Andrey Vladimirovich
Birthdate: January 16, 1969
Nationality: Russian
Federation
Present Status: Principal Scientist of P.N. Lebedev Physics Institute
Business Address: Leninsky Prospect 53, Moscow 119991, Russia

Education
2012 Doctor of Science, (Laser Physics), P. N. Lebedev Physics Institute. Thesis title: "Kinetic effects on charge particle transport and acceleration in a non-equilibrium laser produced plasmas".
1999 Ph.D. (Plasma Physics), P. N. Lebedev Physics Institute.thesis title: " Theoretical investigation of nonclassical transport in a laser produced plasmas ".
1994 M.Sc. (with distinction), Moscow Engineering Physical Institute.

Professional Experience
2001- present Principal Reserch Fellow, Department of Quantum Radiophysics, P. N. Lebedev Physics Institute of the Russian Academy of Science, Moscow.
2006 - Visiting Professor in University of Bordeaux, Bordeaux, France.
3.10.2000.-31.08.2006 PDF in the Department of Physics, University of Alberta, Canada; Associateship Fellow in the Department of Physics, University of Alberta, Canada.
01.02.-31.07.2000 PDF in CPHT, Ecole Polytechnique, Palaiseau, France.
1999-2001 Research Fellow in P.N. Lebedev Physics Institute.
1996-1999 Junior Research Fellow in P.N. Lebedev Physics Institute.
1994-1996 Graduate Student in Moscow Engineering Physical Institute.
1987-1994 Undergraduate Student in Moscow Engineering Physical Institute.

Awards
1998-1999 The stipends of the International Center for Fundamental Physics (project INTAS No. 96-0457) on the programm of the support of the research projects in the field of theoretical physics of young scientists.
2002 -2005 Ingenuity Associateship Fellow (CA\$ 40.000 pa) from Alberta Ingenuity Fund.

Summary of Research Activity
1. Transport phenomena in a hot plasma (nonlocal transport coefficient, heat flux inhibitation, electron susceptibility collisional plasma, penetration of electromagnetic wave in a dense plasma, relaxation of hot spot, elctron transport in magnetic field)
2. Nonlinear laser-plasma interaction (SBS, filamentation instability, fluctuations in a plasma with randomized laser beams, self-focusing of laser beams)
3. Plasma turbulence (ion-acoustic turbulence and anomalous transport, ion-acoustic instability)
4. Electron-ion collisions in a strong laser field (the inverse bremsstrahlung absorption rate)
5. Laser triggered charged particle acceleration (PIC simulation, theory), secondary emission generation

More than 100 publications since 1995.
Selected publications:

1. Bochkarev, S. G., Faenov, A., Pikuz, T. , Brantov, A. V., Kovalev, V. F., Skobelev, I. , Pikuz, S., Kodama, R. , Popov, K. I., Bychenkov, V. Yu., Ion energy spectra directly measured

in the interaction volume of intense laser pulses with clustered plasma, Sci. Rep. vol. 8, 9404 (2018)
2. W. Rozmus, A. Brantov, C. Fortmann-Grote, V. Yu. Bychenkov, S. Glenzer, Electrostatic fluctuations in collisional plasmas, Phys. Rev. E, Vol. 96, 043207(1-15) (2017)
3. A. V. Brantov, E. A. Govras, V. F. Kovalev, V. Yu. Bychenkov, Synchronized ion acceleration by ultraintense slow light, Phys. Rev. Lett., Vol. 116, pp. 085004(1-5) (2016)
4. A.V. Brantov, V.Yu. Bychenkov,W. Rozmus, Electrostatic Response of a Two-Component Plasma with Coulomb Collisions, Phys. Rev. Lett. Vol. 108, pp. 205001(1-5) (2012)
5. A. V. Brantov,Bychenkov V.Yu., Rozmus W., Capjack C.E., Kinetic Susceptibility and Transport Theory of Collisional Plasmas, Phys. Rev. Lett., v.93, 125002 (2004)
6. Gregory G., Glenser S.H, Knight J., Niemann C., Price D., Froula D.H., Edwards M.J., Town R.P.J., Brantov A., Rozmus W., Bychenkov V.Yu., Effect of nonlocal transport on heat-wave propagation, Phys. Rev. Lett., v.92, 205006 (2004)
7. Bychenkov V.Yu., Rozmus W., Tikhonchuk V.T., and Brantov A.V., Nonlocal electron transport in a plasma. Phys. Rev. Lett., v.75, pp. 4405-4408 (1995)

I am seeing that at the time being there is no representative of Russian Federation in BPIF Board of Plasma Physics Division of the EPS whereas a lot of Russian scientist are involved in the relevant studies. There are a two large state projects devoted to the ICF and high field science with few megajoule laser facility and XCELS. A steady growth trend in the high level research conducted by Russian scientists in the field is well pronounce. I think that strong cooperation between Russian and European scientists is very desirable and participation in BPIF Board of Plasma Physics Division can be a good bridge for that.

Toshiki Tajima

Toshiki Tajima graduated with B.S. from U. Tokyo (1971) and Ph.D. from UC Irvine (1975). He serves as Norman Rostoker Chair Professor of University of California at Irvine and Deputy Director of IZEST at Ecole Polytechnique.

He invented in 1979 (with J. Dawson) the wakefield acceleration (WFA) behind an intense laser and its subsequent acceleration of particles to high energies in a very compact way. WFA has been experimentally verified and its compelling astrophysical evidence found in gamma-ray bursts, while its applications are rapidly emerging. It allows for the compact generation of high-energy electrons, ions, and X-rays on ultrafast (femto- to atto- and now zepto-second) time scales. Professor Tajima further proposed WFA in nanoporous solid media that is capable of delivering TeV energies on a chip. He also discovered a mechanism in which the wakefield is responsible for highest energy cosmic rays (beyond 10^{20} eV).

Alongside these developments, Dr. Tajima also laid the foundation for and spearheaded the development of High Field Science. Recent applications of this new field include ultrafast radiolysis, compact cancer therapy (such as compact WFA intraoperative radiation therapy, endoscopic therapy, and hadron therapy), as well as compact THz, X-ray, and gamma ray sources. The latest impact of his work propagates to the incineration of spent nuclear fuel.

His leadership role in this field is exemplified in such as the Chair of ICUIL (International Committee for Ultrahigh Intensity lasers) and the Chairmanship in Extreme Light Infrastructure Scientific Advisory Committee, which ushered in the ELI Project in Europe. Based on his deep camaraderie with and leadership in developing European high field science, its projects, and community, he wishes to devote his experience, vision, and network to further its scientific development in European Physical Society and its community by serving on the Board of EPS.

His awards include: EPS H. Alfven Prize, APS R. Wilson Prize, Chandrasekhar Prize, Enrico Fermi Prize of Italian Physical Society, Einstein Professorship of CAS, Blaise Pascal Chair, Nishina Memorial Prize, Russian Academy of Science member, APS Fellow, etc. He authored (or edited) more than 10 books and 590 papers.

CURRICULUM VITAE of FABRIZIO CONSOLI

Date of birth: 18 March 1974; **Address:** ENEA-Centro Ricerche Frascati, Via E. Fermi 45, 00044 Frascati, Italy; **Phone:** +390694005415; **Email:** fabrizio.consoli@enea.it

MOTIVATION FOR JOINING THE BP&IF BOARD

During my career I have been actively involved in several research activities within the focus of the BP&IF section of the PPD of the EPS, in collaboration with the main international research groups, as described by the record of publications I authored on the main leading journals, the presentations on the main conferences, and the associated international recognitions. Related laser-matter experiments have been performed on the ABC laser facility in Frascati – which I head since the 2019 - but also on the main laser facilities: Texas Petawatt, Vulcan Petawatt, Phelix, LULI2000, ELFIE, PALS, HiLASE, FLAME, LLC-Lund, …. I served as chair and member of the organizing, scientific and editorial committees of recognized conferences and meetings on topics included in the focus of the BP&IF section, and I am now chair of the next European Conference on Laser Interaction with Matter (ECLIM), Naples, Dec. 2020.

For these reason and for my experience in taking part and coordinating international scientific collaborations, I think I could give a significant contribution to the activities of the BPIF section of the PPD of the EPS. I will be very glad to serve as member of the BP&IF Board, in case my candidature will be successful.

PROFESSIONAL EXPERIENCE

- 03/06/2019-today: coordinator of the ***ENEA-Task Force INER*** on inertial confinement fusion, laser-matter interaction and management of the ABC laser in ENEA-C.R.Frascati.
- 01/04/2011-today: research within the Inertial Confinement Fusion group in ENEA-C.R.Frascati on inertial confinement fusion and particle acceleration by intense laser-matter interactions; since Oct. 2018 as a permanent researcher staff. In particular: - ***nuclear fusion due to interaction of intense ultrafast laser pulses with molecular clusters; - shock wave propagation in solids and foam materials; - p+^{11}B nuclear reaction induced by laser-plasma interaction; - electromagnetic pulses (EMPs) generated by intense laser-matter interactions; - development of tailored diagnostics for particles and radiation in the visible, X, γ and microwave regimes.***
- 2012-2014: professor at the Master on "Fusion Energy - Science and Engineering" at University of Tor Vergata.
- 11/12/2006-31/03/2011: research at LNS-INFN in Catania on 1) beam choppers for intense ion currents in SPIRAL2 LINAC. 2) Electron-Cyclotron-Resonance Ion Sources and integration with the Laser Ion Sources.
- 2008-2010: professor of "Electromagnetic fields and waves" at the University Kore of Enna, Italy.
- August 2005 and August 2006: visiting researcher at Particle Physics Laboratory of the Joint Institute of Nuclear Research in Dubna, Russia. Topics: study of plasmas confined within the *ECR* ion sources of last generation.
- 04/11/2004-03/11/2006: post-doc at LNS-INFN in Catania; research on radiofrequency systems for Cyclotrons.
- 09/12/2003-26/07/2004: post-doc at CSFNSM in Catania on passive planar structures at radiofrequency regime.
- 12/03/2004: Doctor of Philosophy (Ph.D.) in Computer Science and Telecommunications at the University of Catania. Research activity on passive planar structures operating in the microwave range.
- 19/10/2000: Master Degree in Electronic Engineering with marks 110/110 cum laude, University of Catania.

FURTHER INFORMATION

- ***AWARDS: 2018:*** P. Bradford et al, **High Pow. Laser Sci. Engin**. 6,e21,2018, *Editor-in-Chief Choice Award*, and on the *cover of the June 2018 issue*. - ***2018:*** M. Cipriani, et al, **Phys. Plasmas** 25,092704,2018; *'Editor's Peak'*. - ***07/10/2015 -*** "*Leos Laska Prize*" for the best contribution to the 7th Plasma Phys. Laser and Appl., 5-7 Oct. 2015, Frascati. - ***22/08/2013 -*** M. Barbui, et al, **Phys.Rev.Lett**. 111,082502,2013: '*Suggested by Editors*' and also *selected for a synopsis on the "Physics Spotlighting Exceptional Research"* page of the journal.
- Author of **59** papers on referred international journals and **33** papers on proceedings of international conferences; author of **9** invited contributions at international conferences. H-index **14** on Web of Science.
- ***Chair*** of the 36th Europ. Conf. on Laser Interaction with Matter, to be held in Naples, Italy on the 6-11 Dec. 2020. ***Chair*** of the 3rd EMP Working Day, 3rd Dec. 2018, Frascati, Italy. ***Member of Sci. and Org. Comm.*** 9th Plasma Phys. by Laser and Appl., 29-31 Oct. 2019, Pisa, Italy. ***Member of the Edit. Comm.*** 30th Symp. Fusion Tech., 17-21 Sept. 2018, Giardini Naxos, Italy. ***Member of the Org. Comm.*** 7th Plasma Phys. by Laser and Appl., 5-7 Oct. 2015, Frascati, Italy.
- Participation to funded research programs within EUROfusion Consortium (Euratom research and training programmes 2014-2020), and also within the 7th Framework Programme European project (SPIRAL2PP) and the the 6th Framework Programme European project (JRA07 EURONS/ISIBHI).
- Active reviewer for: Nature Physics, Phys.Plasmas, Rev.Sci.Instrum., NIM B, JINST, HPLS&E, Fusion Sci.Techn., IEEE Trans.Ant.Prop., IEEE Trans.Microw.Th. Techn., Progr.Electr.Res., J.Electrom.Waves Appl.
- ***SELECTED PUBLICATIONS*:** J. Krása et al, ***PPCF*** 62,052021,2019; F. Consoli et al, ***Sci.Rep.*** 9,8551,2019; F. Bisesto et al, ***HPLS&E*** 7,e53,2019. F. Consoli et al, ***PPCF*** 60,105006,2018; P. Bradford et al, ***HPLS&E*** 6,e21,2018; M. Cipriani et al, ***PoP*** 25, 092704,2018; T.S. Robinson et al, ***Sci.Rep.*** **7**,983,2017; F. Consoli et al,

Sci.Rep. **6**,27889,2016; S. Yu Gus'kov et al, ***PPCF*** **57,**125004,2015; R. De Angelis et al, ***PoP*** 22,072701,2015; P.Koester *et al*, ***PPCF***55,124045,2013; M.Barbui *et al*, ***PRL*** 111,082502,2013; W.Bang *et al*, ***PRL*** 111,055002, 2013; F.Consoli *et al*, ***PR-STAB*** 16, 072001, 2013; S.Barbarino, ***Progr.Electrom.Res.*** 104,1,2010.

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Professional Preparation
Ph.D., Physics, École Polytechnique, Paris, 2007
Masters in Physics of Plasmas, Université d'Orsay, 2003

Appointments
2014 – present, Assistant Researcher, Instituto Superior Técnico
2011 – 2013 Postdoctoral Fellow, Instituto Superior Técnico
2008 – 2010 Postdoctoral Fellow, University of California, Los Angeles

Honors/Awards
Starting grant, Fundação para a Ciência e a Tecnologia, 2014

Most Relevant Recent Publications

1. V. Yakimenko, S. Meuren, F. Del Gaudio, C. Baumann, A. Fedotov, F. Fiuza, T. Grismayer, MJ Hogan, A. Pukhov, L.O. Silva, G. White, *Prospect of Studying Nonperturbative QED with Beam-Beam Collisions* Physical Review Letters E, 122, 190404 (2019)
2. T. Grismayer, M. Vranic, J. Martins, R. A. Fonseca, L. O. Silva, *Seeded QED cascades in counter propagating laser pulses*, Physical Review E, 95, 023210 (2017)
3. T. Grismayer, M. Vranic, J. Martins, R. A. Fonseca, L. O. Silva, *Laser absorption via quantum electrodynamics cascades in counter propagating laser pulses*, Physics of Plasmas 23, 056706 (2016)

Publications
Publication profile: 48 papers in refereed journals, including 8 Physical Review Letters, 1 Astrophysical Journal Letters, 1 Astrophysical Journal, 4 New Journal of Physics, 8 Physics of Plasmas, 1 Computer Physics Communication, 4 Physical Review E, 3 Plasma Physics and Controlled Fusion; Citations 1337; h-index = 18, (Google Scholar)

Research Interests and Expertise
Extreme plasma physics with QED effects, inertial fusion, ion acceleration, plasma instabilities, basic plasma physics, plasma simulations, high performance computing

Motivations to join the EPS board
My scientific expertise and research topics have been related closely to BPIF activity as I started out my career working on ion acceleration and various aspects of plasma instabilities that develop in inertial fusion. I have now moved towards the growing community of ultra-high intensities (UHI) that would be probably more represented in the next years. I have been participating to EPS meetings since 2012 and I am willing to become a member of the BPIF committee to strengthen Plasma physics in Portugal and to represent the activities the scientific of UHI community.