OSVAY, KÁROLY

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b 1964

Habilitation, 2011
Candidate of Physical Sciences (PhD), Hungarian Academy of Sciences, Budapest, 1995
(Title of thesis: *"Forming of the Shape of Ultrashort Laser Pulses"*)
MSc in Physics, JATE University, Szeged, 1990

Position held at ELI-Attosecond Light Pulse Sourse Facility (www.eli-alps.hu)
Research Technology Director: 2013-2019
Head of Laser Division: 2013-2019
Leader of the Scientific Group: 2011-2013
Position held at Extreme Light Infrastructure
Project Manager, 2008-2011
Position held at Department of Optics & Quantum Electronics, University of Szeged, Szeged
Acting Head of Department: 2011-2013
Deputy Head of Department (general), 2003-2010
Deputy Head of Department (finance), 2001-2002
Leader of the TeWaTi Research Group, 1998-
Deputy Head of Department (general), 1997-2001

Associate professor 1996-
Assistant Lecturer 1993-1996

Research related activities
Edited 4 books, published 3 book chapters, 92 refereed journal articles.
Received >1500 indipendent citations on above publications. *h*-index=22
Holds 3 national and 6 international patents.
Reviewing scientific papers for prestigious journals (Appl.Opt., Appl.Phys.B, J.Opt. Soc. Am.B., Opt. Commun., Opt.Express, Opt.Letters).
Examining PhD, MSc and BSc theses.
Scientific collaboration within and outside Hungary.

Scientific visits
Max Born Institute, Berlin, Germany (2005-2008, 40 months)
Atomic Physics, Lund Institute of Technology, Lund, Sweden (2002-2003, 12 months)
Central Laser Facility, Rutherford Appleton Laboratory , UK, visiting scientist (1992-1998, 36 months)
Angewandte Physik, Johannes-Kepler-Universität, Linz, Austria, visiting scientist (1991, 3 months);
Nichtlinearische Optik, Friedrich-Schiller-Universität, Jena , Germany, exchange student (1989, 4 months);

Scholarships
2000-2003: "Széchenyi" Professorship of the Ministry of Education of Hungary
1998-1999 & 2004-2005: "Bolyai János" Research Scholarship of the Hungarian Academy of Sciences
1996-1998: "Magyary Zoltán" Postdoctoral Scholarship of the Ministry of Education of Hungary
1989-1990: Scholarship of the Hungarian Republic for Graduates

Awards
Golden Chalk Award of the Student Council of the Faculty of Natural Sciences, University of Szeged, Hungary (2002)
Master Professor Award of the Council of National Scientific Students' Associations , Hungary, (1999)
Physics Award of the Section of Physics of the Hungarian Academy of Sciences , (1997)
Pro Scientia Gold Medal of the Council of National Scientific Students' Associations , Hungary (1991)

Memberships
Member of the IEEE Lasers and Electro-Optics Society (LEOS), (2003-)
Member of the Optical Society of America (OSA), (1998-)
Member of Society of Photo-optical Instrumentation Engineers (SPIE), (1994-)
Founder Member of the Society of Pro Scientia Medallists , Hungary (1992-)
Member of Roland Eötvös Physical Society (ELFT), Hungary, (1987-)

TEACHING EXPERIENCES

Waves and Optics

Spectroscopy of atoms and molecules (course curriculum in English)
(manuscript in Hungarian - kézirat MAGYARUL)

Nonlinear Optics

Acoustics
A course for music students of the Conservatory of the University of Szeged.

Technology in everyday life
A general course for all students of the University of Szeged.

RESEARCH

TeWaTi Laser and Research Group
A home-designed, -developed and -made femtosecond TW-class laser system, which is based on dual amplification technology (optical parametric amplification and Ti:S).

Ultrafast spectroscopy
Nonlinear refractive indeces. Multiple-photon absorption and nonlinear refraction of optical materials and organic dyes. Time-resolved investigation of laser-matter interactions (gas break down, etc.)

Nonlinear Optics
Sum- and difference frequency generation, optical parametric amplification in UV and NIR, optical damage in materials.

Shaping and Propagation of Laser Pulses
Measurement of group velocity & group velocity dispersion in optical materials, dielectric laser mirrors. Pulse compressors (prismatic and grating), pulse shapers (thermal prism pair, thermal slab, acousto-optical crystal).

Diagnostics of Laser Pulses
Temporal-, phase- and spectral characterisation of femtosecond laser pulses (theoretically and experimentally): auto- and cross correlators, phase sensitive, in high dynamic range (10^8), for large beam diameters (10 cm). Interferometric techniques for (i) phase and amplitude measurements and (ii) determination of angular dispersion.

Dye lasers
Tunable narrowband ~, quenched ~, short cavity ~, laser pulse amplification in dye amplifiers

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COMPLETE LIST OF PUBLICATIONS *Last updated: 16th October, 2005*

PERSONAL
