

CURRICULUM VITAE
of Prof. Dr.rer.nat.habil. Alexander Alexandrov DREISCHUH

1. Personal Data

- o Place of Birth: Sofia, Bulgaria
- o Marital Status: Married with one son
- o Knowledge of Foreign Languages: German, English, Russian

2. Present Position

- o Department of Quantum Electronics, Faculty of Physics, Sofia University
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3. Academic Record

- o M.Sc. in Physics, Faculty of Physics, Sofia University, 1987
Thesis: "Stabilization of the Output Parameters of High-Power Continuous-Wave TEA-CO₂ Lasers"
- o Ph.D. in Physics, Faculty of Physics, Sofia University, 1991
Thesis: "Induced Phase Modulation and Control of the Parameters of the Laser Radiation"
- o Dr.rer.nat.habil., Faculty of Physics, Sofia University, 2001
Thesis: "Self- and Induced Phase Modulation in Cubic Nonlinear Media"

4. Academic Positions

- o Professor of Physics, Department of Quantum Electronics, Sofia University (2004 -)
- o Associate Professor of Physics, Dept. of Quantum Electronics, Sofia University (1998-2004)
- o Head Assistant Professor, Dept. of Quantum Electronics, Sofia University (1994-1998)
- o Senior Assistant Professor, Dept. of Quantum Electronics, Sofia University (1991-1994)
- o Physicist, Scientific Research Department, Sofia University (1991)
- o Engineer-Physicist, Institute for Industrial Cybernetics and Robotics, Bulgarian Academy of Sciences (1987)

5. Research Positions

- o Visiting Scientist, Technical University Graz, Graz, Austria (1996)
- o Alexander von Humboldt Foundation Fellow, Max-Planck Institute for Quantum Optics, Garching, Germany (1997-1998, 2000)
- o Max-Planck Society Fellow, Max-Planck Institute for Quantum Optics, Garching, Germany (1999, 2000, 2001, 2002)

6. Other Responsibilities

- o Head, Department of Quantum Electronics, Faculty of Physics, Sofia University (2003 -- present)
- o Member, Scientific Commission of Physics and Astronomy, Higher Testimonial Committee, Republic of Bulgaria (2004 -- present)
- o Member, Faculty Council, Faculty of Physics, Sofia University (2002 -- present)
- o Member, Scientific Council, Institute of Electronics, Bulgarian Academy of Sciences (2005 -- present)
- o Member, Commission of Physics, National Science Foundation, Bulgaria (2005 - present)

7. Prizes, Memberships and Fellowships

A. Prizes

- o Golden Medal for Excellent Achievements (1979)
- o Golden Medal for Excellent Achievements (1987)

B. Memberships

- o Regular Member, SPIE, ID# 00309307
- o Regular Member, Union of Physicists in Bulgaria (since 1995)
- o Regular Member, Humboldt-Union in Bulgaria, Bulgaria (since 1999)

C. Fellowships

- o CEEPUS (Network A-21) Scholarship (Nov.-Dec., 1995)
- o Fellow of the Österreichischer Akademischer Austauschdienst (at the Technical University Graz, Graz, Austria, Jan.-June, 1996)
- o Fellow of the Alexander von Humboldt Foundation (at MPI for Quantum Optics, Garching, Germany, Jan. 1997-Nov., 1998; 2000)
- o Fellow of the Max Planck Society (at MPI for Quantum Optics, Garching, 1999; 2000; 2001; 2002)
- o Fellow of the Australian National University (at the RSPHysSE - ANU, Nov-Dec., 2004)
- o Fellow of the Australian Research Council (at the Australian National University, RSPHysSE - ANU, June-Oct., 2006)

8. Scientific Projects

- o Project NI-MU-TT-1/1991 : “Nonlinear methods for generation, transmission, deflection and switching of coherent beams/pulses”); "Eureka" Foundation and National Science Fund (Bulgaria);
- o Project F-424/1992: “Nonlinear logical elements and schemes for parallel manipulation and transmission of optical information”, National Science Fund (Bulgaria);
- o Project 247/1999: “Multiple-charged optical vortex solitons”, Science Fund of the Sofia University;
- o Project 316/ 2000: “Dynamics and interactions of ring dark solitary waves: Methods for an effective control”, Science Fund of the Sofia University;
- o Project F-1303 /2003: "Generation and interaction of phase dislocations in the fields of short laser pulses and beams"; National Science Fund (Bulgaria).

9. Fields of interest:

Nonlinear optics (third-order nonlinear susceptibilities, self- and induced phase modulation, four-wave frequency mixing, interference between different nonlinear processes, symbiotic laser beams/pulses, all-optical interactions, one- and two-dimensional dark spatial solitons, dark solitary waves);
Ultrashort pulse generation (dispersion control, pulse characterization, adaptive pulse control, above-threshold ionization, high harmonic generation);
Holography (computer-generated holograms, encoding of phase singularities).

10. Publications - More than 115 scientific publications including 49 papers in peer-review journals, 24 full text reports in proceedings of international conferences, 2 review articles, 43 conference contributions, 1 textbook in physics translated in Bulgarian.