



Sergei P. Nikitin, Ph.D

s.p.nikitin@ieee.org

CURRICULUM VITAE

SUMMARY: *More than 25 years of professional experience in optics and photonics both in science and industry. Author of 50+ research papers and patents in the US and RF on optics and diagnostic of femtosecond lasers, ultra-narrow linewidth lasers, quantum optics, laser-plasma interaction and Raman spectroscopy. Member of Optical Society of America and IEEE Photonics Society.*

EXPERIENCE:

Director and Leading Scientist, OOO “FemtoVision”, Russian Quantum Center Company Group,

Skolkovo, Moscow Region, Russia, Aug 2013 – present

- Research and development of direct diode pumped femtosecond lasers and amplifiers and their applications for industry and science

Leading Scientist, OOO “T8 Sensor”, T8 Company Group,

Moscow, Russia, Dec 2013 – present

- Research in the field of coherent optical reflectometry and characterization of ultra-narrow linewidth lasers

Principal Scientist, Research Support Instruments Inc. at US Naval Research Lab, *Washington, DC, May 2005 – Jan 2013*

- Participated in research projects related to remote detection and identification of chemical and biological samples using multi-wavelength resonance Raman and SERS techniques, co-authored a number of US patents relevant to this field.

- Participated in research related to high energy density physics, laser-plasma interactions, formation and propagation of hydrodynamic plasma jets and shock waves, conducted at PHAROS and NIKE laser facilities at Plasma Physics Division of US Naval Research Lab.

Senior Scientist and Project Manager Quantronix Corporation / Excel Technology, *East Setauket, NY, March 2002 – May 2005.*

- Co-invented and patented femtosecond laser pulse diagnostic (asymmetric SHG-FROG) for real-time characterization and without ‘time-reversal’ ambiguity.
- Managed R&D and production of ultrafast laser systems for variety of applications: ultrafast micromachining, time-resolved optical spectroscopy *etc.*
- Developed practical and comprehensive measurement technique for real-time monitoring of group velocity dispersion, required for CPA laser performance optimization.

Laser Scientist, Quantronix Corporation / Excel Technology, *East Setauket, NY, January 1999 – March 2002.*

- Participated in R&D of commercial CPA femtosecond laser systems. Provided field-service and general technical support to Quantronix customers.
- Designed and built custom Q-switched Ti:sapphire laser system for CERN/Caltech high energy physics group.

Research Graduate Assistant, University of Maryland,

College Park, MD, June 1993 – December 1998.

- Performed experimental research on laser-matter interactions associated with coupling and nonlinear propagation of high intensity femtosecond laser pulses through optical waveguides preformed in plasmas.
- Designed and built 50 mJ 85-fs 10 Hz Ti: sapphire laser system synchronized to external YAG laser amplifier system with sub-100 ps accuracy.
- Maintained and operated lasers incorporated in the Ti:sapphire laser system: CW argon ion laser, DPSS and lamp pumped Q-switched Nd:YAG lasers.

Junior Research Staff Member, Lebedev Physical Institute, Russian Acad. of Sciences,

Moscow, Russian Federation, June 1990 – August 1992.

- Conducted research in quantum optics. Numerically studied evolution of quantum states of light in nonlinear optical processes.

Student, Moscow Institute of Physics and Technology,

Dolgoprudny, Moscow Region, Russian Federation, September 1984 - May 1990.

- Studied self-phase modulation and spectrum broadening of picoseconds pulses in single-mode optical fibers.
- Designed and tested nonlinear fiber-optical compressor for picosecond optical pulses.

PROFESSIONAL MEMBERSHIPS:

- Member of Optical Society of America.
- Member of IEEE Photonics Society.

FOREIGN LANGUAGES:

- Russian language – native speaker
- English language – fluent speaker
- French language – limited to reading of technical documentation