

RESUME.

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Selected publications:

1. A.Yu.Okulov. "Twisted speckle entities inside wavefront reversal mirrors".Phys.Rev.A, accepted (2009).
2. A.Yu.Okulov."Vortex-antivortex labyrinth wavefunction of a degenerate quantum gas". Laser Physics, accepted (2009).
3. A.Yu.Okulov, R.A.Zakharyan. "Multiply connected rotating spiral structures inside wavefront reversal mirrors". Optics and Spectroscopy, accepted (2009).
4. A.Y. Okulov. "Optical and Sound Helical structures in a Mandelstam - Brillouin mirror". JETP Lett, v.88, n.8, pp. 561-566 (2008).
5. A.Y. Okulov. "Angular momentum of a photon and phase conjugation". J. Phys. B: At. Mol. Opt. Phys. v. 41, 101001 (2008).
6. A.Y. Okulov. "3D-vortex labyrinths in the near field of solid-state microchip laser". Journal of Modern Optics., v. 55, n.2, p.241 (2008).
7. A.Y. Okulov. "Exact Theory Of Localized And Periodic Structures In An Active Optical Resonator". Bulletin of the Lebedev Physical Institute, n.10, (2004).
8. A.Yu.Okulov. "The structure of the 3D-vortex lattices in microchip laser resonator". Bulletin of the Lebedev Physical Institute. n.9, (2003).
9. A.Yu.Okulov."Spatial soliton laser: geometry and stability". Optics and Spectroscopy,v.89,N.1,p.145-147(2000).
10. A.Yu.Okulov."On correlations between cavity mode and inversion profile solid-state chip laser". Optics and Spectroscopy. v.77, N6, p. 888-892(1994).
11. A.Yu.Okulov. "Scaling of diode-array-pumped solid-state lasers via self-imaging".Opt.Comm.,v.99, p.350-354(1993).
12. A.Yu.Okulov. "The effect of roughness of optical elements on the transverse structure of a light field in a nonlinear Talbot cavity".J.Mod.Opt.,v.38,N.10,p.1887(1991).
13. A.Yu.Okulov. "Two-dimensional periodic structures in a solid-state laser resonator". SPIE v.1410. Symposium on High Power Lasers OE/LASE'91.Solid-State Lasers II, Conference Chair, George Dube.
14. A.Yu.Okulov." Two-dimensional periodic structures in nonlinear resonator". JOSA, v.B7, N.6, p.1045(1990).
15. A.Yu.Okulov,A.N.Oraevsky." Compensation of self-focusing distortions in quasiresonant amplification of a light pulse" . Sov.J.Quant.Elect.v.18(2),p.233(1988).
16. A.Yu.Okulov,A.N.Oraevsky. "Spatio-temporal behavior of a light pulse in nonlinear nondispersive media",JOSA,v.B3,p.741(1986).

17. A.Yu.Okulov,A.N.Oraevsky."Regular and stochastic self-modulation in a ring laser with nonlinear element".Sov.J.Quant.Elect.v.14(9),p.1235(1984).
18. I.G.Zubarev,A.B.Mironov,S.I.Michailov,A.Yu.Okulov."Accuracy of reproduction of time structure of the exciting radiation in stimulated scattering of light". Sov.Phys.JETP, v.57(2), p.270 (1983).
19. N.G.Basov,I.G.Zubarev,A.B.Mironov,S.I.Michailov,A.Yu.Okulov. "Phase fluctuations of the Stokes wave produced as a result of stimulated scattering of light". Sov.Phys.JETP Lett.,v.31,p.645(1980).
20. N.G.Basov,I.G.Zubarev,A.B.Mironov,S.I.Michailov,A.Yu.Okulov. "Laser interferometer with wavefront reversing mirrors ", Sov.Phys.JETP,v.52(5),p.847(1980).

Book Chapters:

A.Yu.Okulov,A.N.Oraevsky. "*Spatiotemporal dynamics of a wave packet in nonlinear media and discrete maps*".

"*Resonant laser – matter interaction*". Proceedings Lebedev Physics Institute.(in Russian), N.G.Basov ed., Nauka, Moscow, v.187,p.202-222(1988). Library of Congress(www.loc.gov)

control number: 88174540 .

Patents:

1. N.G.Basov,I.G.Zubarev,A.B.Mironov,S.I.Michailov,A.Yu.Okulov. "Interferometer for measurement of correlation functions", Authors certificate (analog of patent in FSU) # 921304priority from August, 8 1980, registered December 14, 1981.
2. N.G.Basov,I.G.Zubarev,A.B.Mironov,S.I.Michailov,A.Yu.Okulov."Laser system". Authors certificate (analog of patent in FSU) # 1088620, Priority from October 23,1980 , registeredDecember 22, 1983.

Education:

- Ph.D., 1994, Physics and Math, Lebedev Physical Institute, Moscow, Russian Federation.
- B.S., M.S., June, 1980, Department of Radiophysics, Moscow Institute of Physics and Technology, Moscow, Russian Federation.
- Thesis: "Periodic and chaotic spatial structures in nonlinear resonators and amplifiers". (1994). Ph.D. Advisor: Anatoly N. Oraevsky

Recent Employment:

May 2007. – Present

Senior Research Fellow. General Physics Institute RAS, Moscow, Russia

February 1985 – September 2006

Senior Research Fellow. Lebedev Physical Institute, RAS, Moscow, Russia

September 1979 – February 1985

Engineer (1979-1982), Junior Research Fellow (1982-1992), Research Fellow (1992-1995).

Lebedev Physical Institute, RAS, Moscow, Russia

Research Interests:

Singular optics, Matter waves, Cavity solitons, Fast light, Phase-locking, Phase conjugation, Nanooptics, Optical chaos, Numerical modeling.

Recent Conference Proceedings:

1. "Vortex-antivortex macroscopic quantum state". AIP Conference Proceedings Vol. 1018, pp. 50-51, (2008). University Udine, Italy, International Conference on Fundamental and computational physics. January 7-9, 2008.
2. "Macroscopic wavefunction for ensemble of ultracold atoms trapped in optical labyrinth. "Proceedings of SPIE , Vol. 7023, 70230G (Apr. 29, 2008). Quantum Informatics - 2007, Zvenigorod, Moscow region. 3-4, October 2007.
3. "3D-configuration of the vortex lattices in microchip laser cavity"., AIP Conference Proceedings Vol. 734, pp. 366, (2004). The Seventh International Conference on Quantum Communication, Measurement and Computing, Glasgow, United Kingdom, 25-29 July 2004.