

CURRICULUM VITAE

Andrei Maimistov

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Present Position: Professor

Moscow State Engineering Physics Institute
Department of Solid State Physics
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Research: Nonlinear optics, ultra-short pulse propagation at resonance condition, theory of self-induced transparency, theory of optical solitons, nonlinear waves in fibers, ultrashort and extremely short electromagnetic pulses propagation, nonlinear optical effects in artificial materials

Education:

1968 - 1974 Moscow Engineering Physics Institute, Theoretical and Experimental Physics Faculty,

1976 - 1979 Postgraduate at Moscow Engineering Physics Institute, Moscow
1980 Ph.D.(Cand.Sci.) in Theoretical and Mathematical Physics, Moscow Engineering Physics Institute, Moscow

Thesis Title

Nonlinear Optical Phenomena in Resonant Medium

Thesis Adviser

Prof. Eduard A. Manikin

1996 Ph.D.(Doct.Sci.) in Theoretical and Mathematical Physics, Moscow Engineering Physics Institute, Moscow

Thesis Title

Dynamic of the Ultra-Short Optical Solitons

Positions Held

05/74 - 04/76 Probationer-Researcher at Department of Solid State Physics, Moscow Engineering Physics Institute, Moscow

04/79 - 05/80 Engineer at Department of Solid State Physics, Moscow Engineering Physics Institute, Moscow

06/80 - 09/86 Junior Scientific Researcher at Department of Solid State Physics, Moscow Engineering Physics Institute, Moscow

10/99 - Present Professor, Moscow Engineering Physics Institute, Department of Solid State Physics

Teaching Experience

06/79 - 06/81 Assistant Professor, Department of Solid State Physics, Moscow Engineering Physics Institute

10/81 - 10/99 Associate Professor, Department of Solid State Physics, Moscow Engineering Physics Institute
 10/99 - Present Professor, Department of Solid State Physics, Moscow Engineering Physics Institute

Courses Taught

Integrated optics (1980-Present)
 Photonics (1999, 1980,)
 Solid state physics (1981)
 Spectroscopy (1979)
 Nonlinear integrated optics (1985-Present)
 Nonlinear waves in optics (2004-Present)

Students and Post Docs:

Postgraduate students: Anton S. Desytnicov (1998-2001), Elena V. Kazantseva (2000-2003)

Graduate students: A.E. Astrakharcik (1993-1994), Anton S. Desytnicov (1995-1998), Elena V. Kazantseva (1998-2000), Vladimir V. Polikarpov (2005-2007), Sergei S. Ozhenko (2007-2008)

Visiting Positions

06/01 - 07/01 Visiting Professor, Laboratoire de Mathematiques, INSA de Rouen , Rouen, France
 04/02 - 06/02 Visiting Professor, Laboratoire de Mathematiques, INSA de Rouen , Rouen, France
 11/03 - 12/03 Visiting Professor, Mathematical Department, University of Arizona, Tucson, Arizona
 04/04 - 06/04 Visiting Professor, Laboratoire de Mathematiques, INSA de Rouen , Rouen, France
 06/05 - 07/05 Visiting Researcher, Centre for Photonics and Photonic Materials, Department of Physics, University of Bath, Bath, UK
 10/05 - 11/05 Visiting Professor, Mathematical Department, University of Arizona, Tucson, Arizona
 05/06 - 06/06 Visiting Professor, Laboratoire de Mathematiques, INSA de Rouen , Rouen, France
 01/07 - 02/07 Visiting Professor, Mathematical Department, University of Arizona, Tucson, Arizona
 09/07 - 10/07 Visiting Researcher, Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, Michigan
 01/08 - 03/08 Visiting Professor, Mathematical Department, University of Arizona, Tucson, Arizona

Editing

Editorial Board Member for Quantum Electronics (Russia)

Reviewer for: Quantum Electronics (Russia), Journal of Experimental and Theoretical Physics (Russia), Optics and Spectroscopy (Russia), Journal of Physics A: Math. and General (UK), Journal of Physics B: Atomic, Molecular & Optical Physics (UK), Journal of Optics A: Pure and Applied Optics (UK), Optics Communications , Physics Letters A, Physical Review A, Physical Review E, Physics Review Letters (USA).

Translations

Russian translation of the book “Soliton Management in Periodic Systems” by Boris Malomed, Fizmatlit, Moscow, (translated in 2007 - 2008).

Conferences organized:

Member, Organizing Committee of III International conference for Students, Young Scientists and Engineers, ”Optics’2003”, St.Petergurg, 20 – 24 October, 2003, Russia.

Member, Organizing Committee of International conference ”Basic Problems of Optics” BPO’2004, St.Petergurg, 17 – 22 October, 2004, Russia.

Member, Organizing Committee of International Conference FPU+50 : Nonlinear waves 50 years after Fermi-Pasta-Ulam, June 21-25 2005, Rouen, France.

Member, Organizing Committee of Workshop Coherent Nonlinear Optics of Artificial Media, Lisbon, 14-16 December, 2006, Portugal.

Member, Organizing Committee of IV International conference ”Basic Problems of Optics” BPO’2006, St.Petergurg, 16 – 20 October, 2006, Russia.

Scientific advisor, Workshop on Optical Solitons, Chimgan-Tashkent, Uzbek SSR, May 22-27, 1989

Member, Organizing Committee of X International Reading on Quantum Optics, September 18-21 2007, Samara, Russia

Member, Organizing Committee of V Conference ”Basic Problems of Optics” BPO’2008, October 20 – 24, 2008, St-Petersburg, Russia.

Research Grants

INTAS, No. 96-0339. Regular and chaotic dynamics of optical solitons in inhomogeneous and active fibers and arrays of waveguides, 1996-1998, (co-PI)

Russian Foundation for Basic Research, 98-02-17429, Nonlinear interaction of the optical wave at the interface between dielectric mediums, 1998-2001, (PI)

Russian Foundation for Basic Research, 00-02-17803, Investigation of the phase transition in a strongly correlated system by exact cluster methods, 2000-2002, (co PI)

Russian Foundation for Basic Research, 03-02-16979, Collective phenomena in a system with strong correlations: exact cluster methods, 2003-2005, (co-PI)

Russian Foundation for Basic Research, 06-02-16406, Thermodynamical and optical properties of systems with strong correlations: exact cluster methods, 2006-2008, (co-PI)

State certified titles

Docent certificate, Department of Solid State Physics, Moscow Engineering Physics Institute, 1986

Professor certificate, Department of Solid State Physics, Moscow Engineering Physics Institute, 2001

Books

Monograph: Nonlinear Optical Waves, Kluwer Academic Publishers, Dordrecht, Boston, London, 1999 (with A.M. Basharov)

Model of the two level quantum dots ensemble interacting with ultrashort pulse of coherent radiation, "Nonlinear Waves: Classical and Quantum Aspects". (Editors: F.Kh. Abdullaev, V.V. Konotop). Proceedings of the NATO ARW, Estoril, Portugal, 13-17 July, 2003, NATO Science Series, Kluwer Academic Publishers, Dordrecht, Boston, London, The Netherlands, 2004. pp. 303-312

Propagation and interaction of extremely short electromagnetic pulses in non-linear media, "Nonlinearity and Disorder: Theory and Applications". (Editors: F.Kh. Abdullaev, O. Bang and M.P. Sorensen). Proceedings of the NATO ARW, Tashkent, Uzbekistan, October 2-6, 2000, NATO Science Series, Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. pp. 263-278

Completely integrable models of nonlinear optics, "Problems of coherent and nonlinear optics", Editors I.P. Gurov, and S.A. Kozlov, St-Petersburg: SPbSITMO, 2002, pp. 114-142

Nonlinear optical effects in artificial materials Eur. Phys. J. Special Topics 'Nonlinear Waves in Complex Systems: Energy Flow and Geometry', Editors Jean-Guy Caputo and Mads Peter Soerensen, Springer, **147**, 265-286 (2007) (with I.R. Gabitov)

Negative Refractive Index Metamaterials in Optics (review paper), Progress in Optics, Editor Emil Wolf, Elsevier, **51**, Chapter 1, 1-68 (2007) (with N.M. Litchinitser, I.R. Gabitov, and V.M. Shalaev)

Coherent optical pulse dynamics in nanocomposite plasmonic Bragg gratings, in "Dissipative Solitons", Nail Akhmediev, Editor, Springer, in press (2007) (with I.R. Gabitov, A. O. Korotkevich, and J. B. McMahon)

Selected Papers

On self-induced transparency under condition of degeneration of resonant energy levels, Sov. Phys. JETP **60**, pp. 913 - 916 (1984) (with A. Basharov).

Polarized solitons in three-level media, Zh.Eksp.Teor.Fiz. **94**, pp. 61-75 (1988)(Sov.Phys. JETP **67**, pp. 2426-2433 (1988))(with A. Basharov).

Present state of self-induced transparency theory Phys.Rept. C **191** p.1-108 (1990) (with A. Basharov , S. Elyutin, Yu. Sklyarov).

Evolution of solitary waves which are approximately solitons of a nonlinear Schrödinger equation, JETP **77**, pp. 727-731 (1993).

Theory of compression of optical pulses in a nonlinear fiber wave guide, Quantum Electronics **24** (6) p. 333 (1994).

Ultra-short pulse propagation at condition of zero second order group velocity dispersion, Quantum Electronics **24** (6) p. 687 (1994).

Propagation of ultrashort light pulse in a nonlinear medium, Optics and Spectroscopy **76**, p. 569 (1994).

Propagation of ultrashort polarized light pulses in a nonlinear medium, Optics and Spectroscopy **78**, p. 483 (1995).

Propagation of ultrashort light pulse under two-photon quasi-resonance condition, Optics and Spectroscopy **76**, p. 488 (1995).

Effect of dissipation on the collapse of a solitary wave in a nonlinear weakly dispersive medium, JETP **81**, p. 275 (1995) (with A.E. Astrakharcik).

Coherent propagation of an optical pulse in a fiber waveguide containing quasidefect impurities. Adiabatic following approximation. *Quantum Electron.* **25**, p. 904 (1995).

Propagation of ultrashort pulses of polarized radiation in a resonant medium. *Quantum Electron.* **27**, p. 935 (1997).

Hamiltonian formulation of self-induced transparency theory without slowly varying envelope approximation. *Chaos, Solitons Fractals* **8**, pp. 369-376 (1997) (with S.O. Elyutin).

Interaction of two spatially separated light beams in a nonlinear Kerr medium, *JETP* **86**, p. 1101 (1998)(with A.S.Desytnicov).

A potential of incoherent attraction between multidimensional solitons, *Phys.Lett. A* **254**, pp. 179-184 (1999) (with A.S. Desytnicov and B. Malomed).

Three-dimensional spinning solitons in dispersive media with the cubic-quintic nonlinearity, *Phys.Rev. E* **61**, pp. 3107-3113 (2000) (with A.S.Desytnicov and B. Malomed).

Self-induced transparency in fibre containing resonant impurities. *Izv.RAN, ser.phys.* **62**, p. 354 (1998) (in Russia) (with A.M.Basharov)

Short optical pulse refraction by a thin film of atoms at two-photon resonance. *J.Mod.Opt.* **46**, pp. 1801-1816 (1999) (with S.O. Elyutin).

Waves of polarized light in nonlinear birefringent fibre, *Chaos, Solitons and Fractals* **11**, pp. 1253-1259 (2000) (with S.O. Elyutin).

Short optical pulse polarization dynamics in a nonlinear birefringent doped fiber, *Zh.Eksp.Teor.Fiz.* (in Russia) **120**, pp. 846-862 (2001)(*JETP* **93**, pp. 501-516 (2001)) (with S.O. Elyutin).

Some models of propagation of extremely short electromagnetic pulses in a nonlinear medium, *Quantum Electronics* **30**, pp. 287-304 (2000).

Propagation and interaction of extremely short electromagnetic pulses in quadratic-nonlinear medium, *Phys.Lett. A***263**, pp. 434-438 (1999) (with E.V. Kazantseva).

Two-photon interaction of coherent radiation with a thin film of resonant atoms, *JETP* **88**, p. 16 (1999) (with A. Basharov and S. Elyutin).

Propagation of ultrashort pulses through a nonresonance quadratically nonlinear medium in the unidirectional wave approximation, *Quantum Electronics* **30**, pp. 623-628 (2000) (with E.V. Kazantseva).

Propagation and interaction of ultrashort electromagnetic pulses in nonlinear media with a quadratic-cubic nonlinearity, *Opt.Commun* **188**, pp. 195-201 (2001). (with E.V. Kazantseva, B.A. Malomed).

Inelastic interaction of ultrashort pulses of polarized light with an ensemble of isolated quantum dots, *Optics and Spectroscopy* **90**, pp. 439-445 (2001) (with S.O. Elyutin, E.V. Kazantseva)

Unidirectional Propagation of an Ultra-Short Electromagnetic Pulse in a Resonant Medium with High Frequency Stark Shift. *Phys.Lett. A* **296**, pp. 34-42 (2002) (with Jean-Guy Caputo).

Propagation of an Ultimately Short Electromagnetic Pulse in a Nonlinear Medium Described by the Fifth-Order Duffing Model, *Optics and Spectroscopy*, **94**, pp. 251-257 (2003).

Propagation of extremely short pulses in nonresonant media: the total Maxwell-Duffing model, *Physica D* **189**, pp. 107-114 (2004) (with J.-G. Caputo).

- Stimulated Raman scattering with strong damp-ing: A simple theory of the spike phenomenon, *Physical Review E* **71**, p. 036601 (8 pages) (2005)(with J.-G. Caputo).
- Reduced Maxwell-Duffing description of extremely short pulses in nonresonant media. *Physical Review E* **71**, 056622 (12 pages) (2005)(with Elena V. Kazantseva and Jean-Guy Caputo).
- Localized polaritons and second harmonic generation in a resonant medium with quadratic nonlinearity, *Physical Review Letters* **96**, 163904 (2006) (with D.V. Skryabin, A.V. Yulin).
- Double-resonant optical materials with embedded metal nanostructures, *J. Opt. Soc. Am. B.* **23**, pp. 535-542 (2006). (with I.P. Gabitov, R.A. Indik, N.M. Litchinitser, Vl.M. Shalaev, J.E. Soneson)
- Coherent propagation of the short pulse of polarized radiation in one-dimensional resonant Bragg lattice, *Quantum Electronics* **36**, pp. 835-841 (2006) (with V.V. Polikarpov).
- Quadratic solitons in media with negative refractive index, *Optics and Spectroscopy* **102**, pp. 99-107 (2007) (with I.P. Gabitov, E.V. Kazantseva).
- Effect of an Optical Negative Index Thin Film on Optical Bistability, *Opt. Lett.* **32**, pp. 151-153 (2007) (with N. M. Litchinitser, I. R. Gabitov, and V. M. Shalaev).
- Electromagnetically induced switching of ferroelectric thin films, *Phys.Rev. B* **75**, 014113 (9 pages) (2007) (with J.-G. Caputo and E. V. Kazantseva).
- Coherent vector π -pulse in optical amplifiers, *J. Opt. Soc. Am. B* **24**, pp. 559-570 (2007) (with E.V. Kazantseva, A.I. Maimistov, S.O. Elyutin and St. Wabnitz).
- Optical Bistability in a Nonlinear Optical Coupler with a Negative Index Channel, *Physical Review Letters* **99**, 113902 (2007) (with N. M. Litchinitser and I. R. Gabitov)
- Solitary waves in plasmonic Bragg gratings, *Appl.Phys. A* **89**, pp. 277-281 (2007) (with I.R. Gabitov, A.O. Korotkevich, and J.B. McMahon).
- Coherent propagation of an optical pulse in a Bragg plasmon grating, *Quantum Electronics* **37** (6) 549 pp. 553 (2007) (with I.R. Gabitov, and A.O. Korotkevich).
- Quadratic solitons in a negative refractive index medium, *Optics and Spectroscopy*, **102**, pp. 90-97, 2007 (with I.R. Gabitov, and E. V. Kazantseva)
- Optical bistability in a nonlinear optical coupler with a negative index channel, *Physical Review Letters*, **99**, p. 113902, 2007, (with N. M. Litchinitser and I.R. Gabitov)
- Nonlinear optical phenomena in the medium with positive-negative refractive index, *Bulletin of the Russian Academy of Sciences*, in press (2008) (with I.R. Gabitov)
- Solitary waves in nonlinear oppositely directed coupler, *Optics and Spectroscopy* **104**, pp. 253 - 257(2008) (with I.R. Gabitov, and N. Litchinitser).

Selected Conference Proceedings

Coherent propagation of an optical pulses in a fiber containing quasi-resonant impurities, Proceedings of SPIE **2798**, pp. 125 – 131 (1996).

Propagation of short pulses of polarized radiation in a resonant medium, Proceedings of SPIE **3239**, pp. 143 – 151 (1997).

On ultrashort light pulses propagation in nonlinear media, Proceedings of SPIE **3735**, pp. 34 – 42 (1999).

Ultrashort pulses propagation in quadratic-nonlinear medium, Proceedings of SPIE **4061**, pp. 203 – 213 (2000) (with E.V. Kazantseva).

Spiraling of two-dimensional beams and three-dimensional light bullets in nonlinear media, Proceedings of SPIE **4061**, pp. 193-202 (2000) (with A.S. Desytnikov).

Short optical pulse refraction by a thin film of atoms at two-photon resonance, Proceedings of SPIE **4061**, 214-221 (2000). (with S.O. Elyutin)

Ultra-short pulse propagation in quadratic medium with regard to the dispersion of non-linear susceptibility. Proceedings of SPIE **4354**, 118-124 (2001) (with E.V. Kazantseva).

Polarization dynamics in non-linear birefringent active fibers. Proceedings of SPIE **4354**, 155-165 (2001) (with S.O. Elyutin).

Ultrashort optical pulse propagation in Kerr medium with quasi-resonant impurities. Proceedings of SPIE **4352**, pp. 33-42 (2001) (with A.M. Basharov).

The function of nonlinear susceptibility dispersion in modulational instability and soliton formation in quadratic-nonlinear medium. Proceedings of SPIE **4605**, pp.245-253 (2001) (with E.V. Kazantseva).

Coherent responses of quantum dots layer to short optical pulse excitation. Proceedings of SPIE **4605**, pp. 171-181 (2001). (with S.O. Elyutin).

Evolution of ultrashort and extremely short electromagnetic pulses in quadratic-cubic non-linear medium. Proceedings of SPIE **4752**, p. 49-54 (2001).

Nonlinear polaritons in Bose-Einstein condensates in optical lattices. Proc. SPIE **5402**, 107-114, International Workshop on Quantum Optics 2003; Vitaly V. Samartsev; Ed. (with E.V. Kazantseva)

Echo response of ensemble of cooled atoms in optical lattices. Proc. SPIE **5402**, 150-160, International Workshop on Quantum Optics 2003; Vitaly V. Samartsev; Ed. (with S.O. Elyutin)

Resonant interaction of electromagnetic waves in quadratic nonlinear medium, Proc. SPIE **6181**, 61810K (2006); Photon Echo and Coherent Spectroscopy 2005; Vitaly V. Samartsev; Ed. (with E.V. Kazantseva, D.V. Skryabin)

Coherent amplification of the short optical pulse in a non-linear birefringent medium, Proc. SPIE **6612**, 66120E, 13 April 2007, ICONO 2007: Laser Optics 2006: Diode Lasers and Telecommunication Systems, Nikolay N. Rosanov, Editor. (with Elena V. Kazantseva, Sergei O. Elyutin, and Stefan Wabnitz)

Propagation of videopulse through a thin layer of two-level atoms possessing permanent dipole moments, Proc. SPIE **6612**, 66120I, 13 April 2007, ICONO 2007: Laser Optics 2006: Diode Lasers and Telecommunication Systems, Nikolay N. Rosanov, Editor. (with S.O. Elyutin).

Echo response of nonlinear thin film of meta-atoms, Proc. SPIE **6728**, 67281P, 31 July, 2007, ICONO 2007: Novel Photonics Materials; Optics and Optical Diagnostics of Nanostructures, Oleg A. Aktsipetrov; Vladimir M. Shalaev; Sergey V. Gaponenko; Nikolay I. Zheludev, Editors. (with S.O. Elyutin).

Three wave interaction in negative refractive index materials with quadratic nonlinearity, Quantum Electronics and Laser Science Conference, 2007. QELS '07 (978-1-55752-834-6) 6-11 May 2007. p.1 (with I.R. Gabitov, E.V. Kazantseva)

Selected seminars:

Negative refractive index medium: refraction and surface wave, University of Arizona, October 5, 2005

Generalized Duffing oscillator models in Nonlinear Optics, Department of Physics, University of Bath, Bath, UK, July 14, 2005

Nonlinear optical phenomena in the negative refractive media, Institute of Solid State Physics, Chernogolovka, December 21, 2007

Transition layer between positive- and negative-index materials, University of Arizona, January 30, 2008

Selected conference talks

Spiraling of two-dimensional beams and three-dimensional light bullets in nonlinear media, VIII International Readings on Quantum Optics, October 27 - October 29, 1999, Kazan, Russia (with A.S. Desyatnikov).

Ultrashort pulses propagation in quadratic-nonlinear medium with, Nonlinear solitary waves in the uniaxial ferroelectric, VIII International Readings on Quantum Optics, October 27 - October 29, 1999, Kazan, Russia (with E.V. Kazantseva).

Nonlinear solitary waves in the uniaxial ferroelectric, VIII Russian Youth Scientific School "Coherent Optics and Optical Spectroscopy", Kazan, Russia (with E.V. Kazantseva).

Description of the nonlinear electromagnetic wave propagation in ferroelectric in base of the Maxwell-Duffing model, International conference "Basic Problems of Optics" BPO'2004, St.Petersburg, 17 - 22 October, 2004, Russia, (with E.V. Kazantseva).

Theory of parametric interaction of the electromagnetic waves in resonant quadratic-nonlinearity medium, Eight International Symposium on Photon Echo and Coherent Spectroscopy (PECS-2005) September 18 - 25, 2005, Kaliningrad, Russia (with E.V. Kazantseva and D.V. Skryabin).

Negative refractive media: the refraction and surface waves, IX International Youth Scientific School "Coherent Optics and Optical Spectroscopy" October 27 - 29, 2005, Kazan, Russia.

Optical solitons in negative refractive medium with quadratic nonlinearity, IV International conference "Basic Problems of Optics" BPO'2006, St-Petersburg, October 16- 20 2006 (with I.R. Gabitov, E.V. Kazantseva)

Ambidextrous light in a nonlinear left-handed world, SPIE Optics Photonics Conference, Photonic Metamaterials Workshop, San Diego, CA, August 2007. (with N. M. Litchinitser, I. R. Gabitov, V. M. Shalaev)

Nonlinear transmission of layered structures containing negative index materials, 1st European Topical Meeting on Nanophotonics and Metamaterials, Seefeld, Austria, 2007 (with N. M. Litchinitser, I.R. Gabitov, V. M. Shalaev)

Optical bistability in a nonlinear optical coupler with a negative index channel, Photonic Metamaterials: From Random to Periodic (META) 2007. (with N. M. Litchinitser, I. R. Gabitov).

Nonlinear optics in negative index materials, ICONO-LAT, May 28 – June 1, 2007, Minsk, Belarus (with N. M. Litchinitser, I.R. Gabitov, V. M. Shalaev)

Coherent Short Pulse Propagation in Resonantly Absorbing Bragg Grating, ICONO-LAT, May 28 – June 1, 2007, Minsk, Belarus (with I.R. Gabitov, A.O. Korotkevich)

Selected Invited Talks

The Description of the Ultrashort Pulse Propagation in Non-Linear Media Under Quasi-Resonance Condition, Les Houches Workshop "Optical solitons: Theoretical challenges and industrial perspectives", September 28 – October 2, 1998, France.

Completely integrable models of nonlinear optics, II International conference of Youth Scientists , "Optics-2001" , October 16 – 20, 2001 St-Petersburg, Russia

Propagation and interaction of extremely short electromagnetic pulses in non-linear media, Nonlinearity and Disorder: Theory and Applications, NATO Advanced Research Workshop, 2 – 6 October 2000, Tashkent, Uzbekistan

Model of the two level quantum dots ensemble interacting with ultra-short pulse of coherent radiation, NATO Advanced Research Workshop "Nonlinear Waves: Classical and Quantum Aspects," July 13 – 17, 2003, Estoril, Portugal,

ICONO/LAT 2005, International Conference on Coherent and Nonlinear Optics and International Conference on Lasers, Applications, and Technologies, May 11 – 15, St.Petersburg, Russia

Propagation of extremely short electromagnetic pulses in a nonlinear medium, International Conference FPU+50 : Nonlinear waves 50 years after Fermi-Pasta-Ulam, June 21 – 25 2005, Rouen, France.

Three wave interaction in negative refractive index materials with quadratic nonlinearity, International Conference Coherent Control of the Fundamental Processes in Optics and X-ray-Optics (CCFP'2006), June 29 – July 3, 2006, Nizhny Novgorod, Russia.

Resonant Bragg grating – one-dimensional metamaterials, X Russian Youth Scientific School "Coherent Optics and Optical Spectroscopy", October 24 – 26, 2006 Kazan, Russia.

Coherent short pulse propagation of the polarized radiation in resonantly absorbing Bragg grating, Coherent Nonlinear Optics of Artificial Media, December 14 – 16, 2006, Lisbon, Portugal.

Nonlinear Optical Effects in Positive-Negative Refractive Index Materials, X International Reading on Quantum Optics, September 18 – 21 2007, Samara, Russia.