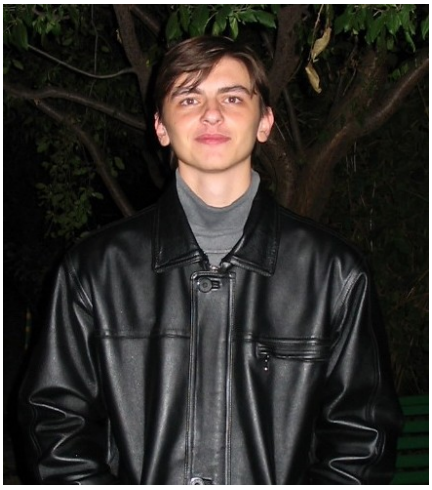
CURRICULUM VITAE

Igor V. Guryev



Master of Science in Lasers and Electro-Optics,
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Student Member IEEE/ LEOS since 2003 #41509659
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1. Personal data

07.09.1983	Was born in Kharkiv, Ukraine in the family of workers. Father is Vladimir N. Guryev (was born on 06.09.1959). Mother is Irina V. Guryeva (was born on 14.08.1959)
Since 1.03.2003	Student Member IEEE/LEOS. **Member Number 41509659**

2. Biographical data

Sep.1990-Jun.1997	Study in the high-school N160, Kharkov, Ukraine
Sep.1997-Jun.2000	Study in the economical lyceum N161 in Physical and Mathematical class, Kharkiv, Ukraine
Sep.2000-Sep.2004	Study in Kharkiv National University of Radio Electronics (Kharkiv, Ukraine), faculty of Electronic Technique.
Jul.2004	Get the Bachelor degree on Lasers and Optoelectronic Techniques

Sep.2004 – Jun.2005	Master degree student. Master degree project title “The investigation and the computation of characteristics of the nonlinear waveguides on the basis of photonic crystals”
Since Oct.2002	Scientific researcher at Lab. “Photonics”, Department of Physical Foundations of Electronic Engineering, Kharkiv National University of Radio Electronics
Jun. 2005	Defended Master Degree thesis “The investigation and the computation of characteristics of the nonlinear waveguides on the basis of photonic crystals” with honors.
Sep. 2005-Aug. 2006	Researcher at the Laboratory “Photonics”, Dept. Physical Foundation of Electronic Engineering.
Since Nov. 2006	PhD student of lab. Photonics of Kharkiv National University of Radio Electronics

3. Publications

2003-2006 years	7 published journal paper, 18 published papers in proceedings of international conferences Detailed information can be find in Appendix

4. Scientific work

Simulation of integrated optical devices based on 1D, 2D photonic crystals, holey fibers and fiber components modeling, the devices on the basis of nonlinear photonic crystals with Kerr-nonlinearities. The investigation and the development of the fiber-optical network components.

At the moment the problem I solve is the investigation of influence of different types of optical nonlinearity on characteristics of photonics crystal-based planar devices.

5. Learned educational courses related to investigations area

Mathematical Subjects: Differential Eq. (108 hrs), **Analytical Geometry** (136 hrs), **Mathematical Analysis** (324 hrs), **Function of Complex Variable** (54 hrs), **Probability Theory** (108 hrs).

Professional Subjects: Chemistry and the fundamentals of Materials Science (108 hrs); **Physics** (324 hrs); **Fundamentals of Quantum Mechanics** (108 hrs); **Vacuum and Plasma Electronics** (81 hrs); **Fundamentals of Quantum Electronics and Laser Technique** (243 hrs); **Fiber- and Integrated Optics** (108 hrs); **Quantum Well Structures** (54 hrs); **Applied Optics** (54 hrs); **Semiconductor Lasers** (81 hrs); **Electrodynamics** (108 hrs); **Adaptive Optics** (54 hrs); **Computer Technology in Optoelectronics and Laser Technique** (136 hrs); **Computer Modeling of Optical Devices and Technologies** (162 hrs); **Optical-Fiber Systems** (108 hrs); **Optical Signals Processing** (81 hrs); **Periodical Structures and Their Applications in modern Nano-Electronics** (216 hrs)

6. Other interests

Programming: **Matlab** (five-year experience), **MathCAD** (four-years experience), **C++:** *Borland C++* (five-year experience)**,** *Visual C++* (five-year experience)**,** *Borland C++ Builder* (one-year experience), **Java:** *JBuilder* (one-year experience), **Pascal:** *Borland Pascal* (one-year experience), **Femlab** (three-year experience)

APPENDIX 1

Journal papers:

1. I.A. Sukhoivanov, A.V. Kublik, R. Rojas-Laguna, I.V. Guryev, A.V. Dyogtyev, P. S. Ivanov, "Modified Effective-Index Model for Study of Holey-Waveguide Optical Components" Proc. SPIE No 5582, 230-236 (2004)

2. I.V. Guryev, I.A. Sukhoivanov, O.V. Shulika, A.V. Kublik “Demultiplexing using the wideband filters on the basis of 2D photonic crystals”, Journal “Radiotechnika”, 125-131 (2005)

3. Igor V. Guryev, Oleksiy V. Shulika, Igor A. Sukhoivanov, Olga V. Mashoshina, “Improvement of characterization accuracy of the nonlinear photonic crystals using finite elements-iterative method”, Applied Physics – B: Lasers and Optics, Volume 84, №1-2, pp.83-87 (2006)

4. I. A. Sukhoivanov, I. V. Guryev, O. V. Shulika, A. V. Kublyk, O. V. Mashoshina, E. Alvarado-Méndez, J. A. Andrade-Lucio “Design of the photonic crystal demultiplexers for ultra-short optical pulses using the gap-maps analysis”, Journal of Optoelectronics and Advanced Materials, Vol. 8, No. 4, August 2006, pp. 1626-1630

5. I. Guryev, I. A. Sukhoivanov, S. Alejandro-Izquierdo, M. Trejo-Duran, J. M. Estudillo-Ayala, J. A. Andrade-Lucio and E. Alvarado-Mendez, “Analysis of Integrated Optics Elements Based on Photonic Crystals”, Revista Mexicana de Fisica Vol.52, No.5, pp. 453-458. (2006)

6. I.A. Sukhoivanov, I.V. Guryev, J.A. Andrade Lucio, E. Alvarado Mendez, M. Trejo-Duran and M. Torres-Cisneros, “Photonic density of states maps for design of photonic crystal devices” doi:10.1016/j.mejo.2007.07.091 Microelectronics Journal Vol. 39, 685-689 (2008)

7. I.V. Guriev, I.A. Sukhoivanov, A.V. Shulika, A.V. Kublik “A New Demultiplexer Based Upon Two-Dimensional Photonic Crystals for Optical Integrated High-Density Circuits”, Telecommunications and Radio Engineering, Volume 66, Issue 6, pp. 481-489 (2007)

8. I.V. Guriev, I.A. Sukhoivanov, A.S. Gnatenko, V.I. Lipkina, “Multiple Plane Waves Expansion Method for Dispersive Media”, Telecommunications and Radio Engineering, Volume 67, Issue 9, pp. 833-841 (2008)

APPENDIX 2

Papers in Conferences proceedings:

1. I.V. Guryev, “Effective Refractive Index of Two-Dimensional Photonic Crystals” 7-th International student conference, 2003, Kharkov, Ukraine, p. 169

2. P.S. Ivanov, A.V. Kublik, I.V. Guryev, A.V. Degtev, S.I. Petrov, "Validity of the effective index model for analysis of photonic crystal fibers", Laser and Fiber Optical Network Modeling, LFNM’2003, September 16-20, 2003, Alushta, Crimea, Ukraine, p. 182-184

3. I.V. Guryev, “Investigation of the electromagnetic field distribution in 1D photonic crystals”, 8-th International student conference, , 2004, Kharkov, Ukraine, p. 182

4. I.V. Guryev, I.A. Sukhoivanov, P.S. Ivanov, A.V. Kublik, A.V. Dyogtyev, “Theoretical Investigations of One-Dimensional Photonic Crystal with Kerr-Nonlinearities” Laser and Fiber Optical Network Modeling, LFNM’2004, September 6-9, 2004, Kharkov, Ukraine, p. 146-148

5. I.V. Guryev, “The investigation of properties of the optical waveguide on the basis of photonic band gap structures”, 9-th International student conference, 2005, Kharkov, Ukraine, p. 136

6. G.V. Tkachenko, I.V. Guryev, “Experimental investigation of the 2-channel demultiplexer on the basis of microstrip structure with photonic band gap”, 9-th International student conference, 2005, Kharkov, Ukraine, p. 139

7. I.V. Guryev, I.A. Sukhoivanov, A.V. Kublik, “Wideband Filters Based on 2D-Photonic Crystals”, International Conference on Coherent and Nonlinear Optics, 2005, St. Petersburg, Russia, IThH4

8. I.A. Sukhoivanov, I.V. Guryev, O.V. Shulika, “On design of wavelength division multiplexers in 2D photonic crystals”, LFNM 2005, 15-17 September 2005, Yalta, Crimea, Ukraine

9. G.V. Tkachenko, V.I. Fesenko, I.V. Guryev, “Wavelength division multiplexer based on FBG with defect”, LFNM 2005, 15-17 September 2005, Yalta, Crimea, Ukraine

10. I.V. Guryev, I.A. Sukhoivanov, “The accurate parameters fitting of the nonlinear 1D Photonic crystal for effective optical power limiting”, LFNM’2006, June 29 - July 1, Kharkov, Ukraine, pp. 407-410 (2006)

11. I.A. Sukhoivanov, E.Y. Cabal, I.V. Guryev, E. Alvarado-Mendez, J.A. Andrade-Lucio, “Photonic crystal demultiplexers for ultra-short optical pulses: design and characterizations”, WS NAA 2006, Leon, Mexico (2006)

12. I.A. Sukhoivanov, I.V. Guryev, E. Alvardo-Mendez, J.A. Andrade-Lucio, “Optical Intensity Sensing and Limiting Using Nonlinear Photonic Crystals”, Frontiers in Optics 2006, Rochester, NY, USA, JWD22

13. I.V. Guryev, I.A. Sukhoivanov, E. Cabal Yepez, A.V. Kublik, “Comparative Analysis of the PBG and PhDOS maps synthesis”, 1st Multiconference of Electronics and Photonics (Conference on Advanced Optoelectronics and lasers), Salamanca, Guanajuato, Mexico, pp. 17-20 (2006)

14. I.V. Guryev “Cristales Fotonicos” (invited talk), Conferencia Magistral del 2do Encuentro Regional de Optica, Morelia, Michoacan, Mexico (2006)

15. G.V. Tkachenko, I.V. Guryev, “Dispersion compensators on the basis of cirped layered structures”, 11-th International student conference, 2007, Kharkov, Ukraine, p. 222

16. Guryev, Igor V.; Sukhoivanov, Igor A. “Plane Wave Expansion Method with Considered Material Dispersion” // CAD Systems in Microelectronics, 2007. CADSM apos;07., 19-24 Feb. 2007 Page(s): 23 - 24
Digital Object Identifier 10.1109/CADSM.2007.4297472

17. I. A. Sukhoivanov, I. V. Guryev, J. A. Andrade Lucio, E. Elvarado Mendez and M. Torres-Cisneros Photonic Density of States Maps for Design of Photonic Crystal Devices Paper // The Sixth international Conference on Low Dimensional Structures and Devices (LDSD 2007). - The Caribbean Archipelago of San Andres (Colombia), 2007. - Paper Tu-P69.

18. I.V. Guryev, I.A.Sukhoivanov, E. Alvarado Mendez, R. Rojas-Laguna, J. Estudillo Ayala, J.A. Andrade Lucio “Theoretical study of optical processes in nonlinear photonic crystals devices”, 1st international workshop on Optoelectronic Physics and Technology OPT’2007, Kharkiv, Ukraine (2007)

19. V.I. Fesenko, I.V. Guryev, “Numerical modeling of active integrated optical elements on the photonic crystals basis”, VII Kharkiv Young Scientist Conference on “Radiophysics and Electronics” (Invited talk) YSC’2007, IRE NASU, Kharkiv, Ukraine (2007)

20. I.V. Guryev, I.A. Sukhoivanov, A.S. Gnatenko, V.I. Lipkina, “The method for chromatic dispersion consideration in plane waves expansion method”, VII Kharkiv Young Scientist Conference on “Radiophysics and Electronics” YSC’2007, IRE NASU, Kharkiv, Ukraine (2007)

21. A.S. Gnatenko, V.I. Lipkina , I.V. Guryev, “Plane waves expansion method for computation of the band structure of 1D photonic crystal”, VII Kharkiv Young Scientist Conference on “Radiophysics and Electronics” YSC’2007, IRE NASU, Kharkiv, Ukraine (2007)

APPENDIX 3

Grants and awards:

1. Grant from the IEEE/LEOS chapter for participation in conference Laser and Fiber Optical Network Modeling, LFNM'2003, September 16-20, 2003, Alushta, Crimea, Ukraine (conference fee compensation)

2. Grant from the IEEE/LEOS chapter for participation in conference Laser and Fiber Optical Network Modeling, LFNM'2004, September 6-9, 2004, Kharkov, Ukraine (conference fee compensation)

3. Grant from the IEEE/LEOS chapter for participation in conference Laser and Fiber Optical Network Modeling LFNM 2005, 15-17 September 2005, Yalta, Crimea, Ukraine (conference fee compensation)

4. Grant from the IEEE/LEOS chapter for participation in conference Laser and Fiber Optical Network Modeling LFNM'2006, June 29 - July 1, Kharkov, Ukraine (conference fee compensation)

5. Grant from University of Guanajuato (Mexico) for travelling, carrying out the joint researches and giving the lectures course at the faculty of Mechanics, Electrics and Electronics Engineering (FIMEE, UGTO) (2006)

6. Grant from the University of Guanajuato for participation in conference 1st Multiconference of Electronics and Photonics (Conference on Advanced Optoelectronics and lasers), Salamanca, Guanajuato, Mexico (2006) (conference fee compensation, travel grant)

7. Grant from the University of Guanajuato for participation in conference „Conferencia Magistral del 2do Encuentro Regional de Optica", Morelia, Michoacan, Mexico (2006) (conference fee compensation, travel grant)

8. Awarded by the governor of Kharkiv region with IBM PC as the best young scientist of Kharkiv in field of Physics and astronomy

9. Grant from the IEEE/LEOS chapter for participation in 1st international workshop on Optoelectronic Physics and Technology OPT'2007, Kharkiv, Ukraine (conference fee compensation)

10. Awarded by organizing committee of YSC'2007 conference (VII Kharkiv Young Scientist Conference on "Radiophysics and Electronics") with the membership of OSA

11. Awarded by organizing committee of YSC'2007 conference (VII Kharkiv Young Scientist Conference on "Radiophysics and Electronics") with Honorary Mention for excellent presentation of the invited paper in the Optics&Photonics section

12. Grant from University of Guanajuato (Mexico) for travelling, carrying out the joint researches and giving the lectures course at the faculty of Mechanics, Electrics and Electronics Engineering (FIMEE, UGTO) (2008)