

Curriculum Vitae

Hanna O. Sliusarenko (Kryvchikova)

Junior Researcher

Department of Mathematical Physics
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Date of Birth

May 28, 1986

Employment

2009 – present.

Institute of Radiophysics and Electronics of National Academy of Sciences of Ukraine,
Department of Mathematical Physics, www.ire.kharkov.ua
Research Engineer (2009 – 2012), Junior Researcher (2013 – present)

2008 – 2009

Kharkov National University of Radioelectronics, Trainee researcher

Education, Degree

2003 – 2008

Student. Kharkiv National University, Faculty of Mechanics and Mathematics. M.S. degree in Applied Mathematics.

Current Research Interests

- Rigorous methods for solving electrodynamic problems in time domain
- Computational methods in electrodynamics
- Mathematical simulation in the theory of resonance wave scattering
- Nanophotonics: silicon photonics, plasmonics and metamaterials

Professional Activities

2011 – 2012

Volunteer work at the International Young Scientist Conference on Radiophysics, Electronics, Photonics and Biophysics, Kharkiv, Ukraine

2011 – present

IEEE Student Member

Awards

2012

Young Scientist Diploma awarded by the IEEE Kharkiv Joint Chapter of Ukraine Section for the paper “*Energy balance equation and reciprocity relations for two-dimensionally periodic structures*” at the conference Ultrawideband and Ultrashort Impulse Signals, Sevastopol, Ukraine, 2012

2011

Diploma for the Best Presentation in the Electromagnetics Section at the Young Scientist Conference on Radiophysics, Electronics, Photonics and Biophysics, Kharkiv, 2011.

Conferences and workshops attended

14-th International Conference on Mathematical Methods in Electromagnetic Theory, August 28–30, 2012, Kharkiv, Ukraine, presented an oral talk.

6-th International Workshop on Ultrawideband and Ultrashort Impulse Signals (UWBUSIS), September 17–21, 2012, Sevastopol, Ukraine, presented an oral talk.

11-th International Young Scientist Conference on Radiophysics, Electronics, Photonics and Biophysics, November 28 – December 30, 2011, Kharkiv, Ukraine, presented an oral talk.

International Young Scientists Conference on Computer Science and Engineering (CSE), May 14–16, 2009, Lviv, Ukraine, presented an oral talk.

12-th International Young Scientists Conference on Radioelectronics and Youth in the XXI Century, March 28–30, 2008, Kharkiv, Ukraine, presented an oral talk.

Publications/Conference Papers

Journal Papers

1. L. G. Velychko, G. O. Kryvchikova (Sliusarenko) and Y. K. Sirenko, “Two-dimensionally periodic gratings. Part I. Initial boundary-value problems and exact absorbing conditions for the rectangular Floquet channel”, *Telecommunications and Radio Engineering*, Begell House Publ., 2012, vol. 71, No. 19, pp. 1719–1731.
2. L. G. Velychko and G. O. Kryvchikova (Sliusarenko), “Two-dimensionally periodic gratings. Part II. Some regularities in the behavior of nonstationary and steady-state fields in the rectangular Floquet channel”, *Telecommunications and Radio Engineering*, Begell House Publ., 2012, vol. 71, No. 20, pp. 1815–1831.
3. L. G. Velychko, G. O. Kryvchikova (Sliusarenko) and Y. K. Sirenko, “Two-dimensionally periodic gratings. Part III. Elements of the spectral theory”, *Telecommunications and Radio Engineering*, Begell House Publ., 2013, vol. 72, No. 5, pp. 385–392.
4. L. A. Pazynin and G. O. Kryvchikova (Sliusarenko), “Focusing properties of Maxwell’s fish eye medium”, *Progress in Electromagnetic Research*, 2012, vol. 131, pp. 425–440.

Conference Proceedings

1. L. Velychko, A. Kryvchikova (Sliusarenko), “Elements of the spectral theory of double-periodic gratings”, *Proceedings of International Conference on Mathematical Methods in Electromagnetic Theory*, Kharkiv, Ukraine, August 28–30, 2012 (CD-ROM).
2. A. A. Kryvchikova (Sliusarenko), *Proceedings of the 6-th International Conference on Ultrawideband and Ultrashort Impulse Signals*, Sevastopol, Ukraine, September 17–21, 2012 (CD-ROM).
3. K. Sirenko, A. Kryvchikova (Sliusarenko), H. Bađci, “Time domain discontinuous Galerkin method with exact absorbing boundary conditions for analyzing three-dimensional diffraction gratings”, *Proceedings of IEEE International symposium on Antennas and Propagation and USNC-URSI National Radio science Meeting*, Chicago, USA, July 8-14, 2012 (CD-ROM).
4. A. A. Kryvchikova (Sliusarenko), “Electrodynamic properties of nonstationary and steady-state fields in the Floquet channel of a three-dimensional periodic structure”, *Proceedings of the 11-th Kharkiv Young Scientist Conference on Radiophysics, Electronics, Photonics and Biophysics*, Kharkiv, Ukraine, November 28 – December 2, 2011 (CD-ROM).
5. A. I. Amosova, A. A. Kryvchikova (Sliusarenko), V. L. Pazynin, Y. K. Sirenko, “The formation and radiation of high-power radio pulses: new approaches to modeling and analysis of microwave compressors”, *Proceedings of the 5-th International Workshop on Ultrawideband and Ultrashort Impulse Signals*, Sevastopol, Ukraine, September 6–10, 2010, pp. 16–21.

Language English, Russian (native speaker), Ukrainian (fluent)

Referees

Academician Vladimir M. Yakovenko

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National Academy of Sciences of Ukraine, Kharkiv, Ukraine

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Professor Yuriy K. Sirenko

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Professor Sergey L. Prosvirnin

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Institute of Radio Astronomy,
National Academy of Sciences of Ukraine, Kharkiv, Ukraine

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