CURRICULUM VITAE

ALEXANDER VLADIMIR SERGIENKO

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Education:

Ph.D., 1987, Moscow State University, Russia, Quantum Radiophysics and Optics
M.S., 1981, Moscow State University, Russia, Physics, Optics

Professional Positions:

9/2003 – present	Boston University, Department of Electrical and Computer Engineering, Professor.
9/2003 – present	Boston University, Department of Physics, Professor.
9/1996 – present	Boston University, Photonics Center, Faculty.
12/2021-present	Distinguished Associate Member, TUBITAK Research Institute for Fundamental Sciences, Gebze, Turkey.
9/2017 – 8/2018	Visiting Professor and Quantum Optics Lecturer, Department of Engineering Information (DEI), University of Padua, Italy
1/2011 – 12/2011	Visiting Professor and Quantum Optics Lecturer, Department of Engineering Information (DEI), University of Padua, Italy
11/2006–10/2009	Quantum Information Partners LLP, Partner
7/2006 – 10/2009	London Quantum Networks Ltd, Member Advisory Board
1/2002 – 12/2005	Elsag S.p.A. Genoa, Italy, Consultant.
9/2000 – 4/2003	Boston University, Department of Electrical and Computer Engineering, Associate Professor.
9/2000 – 4/2003	Boston University, Department of Physics, Associate Professor.
10/1999 – 5/2001	MagiQ Technologies, Somerville, Massachusetts, Consultant.
9/1996 - 8/2000	Boston University, Department of Electrical and Computer Engineering, Assistant Professor.
9/1993 - 8/1996	University of Maryland Baltimore County, Department of Physics, Research Assistant Professor.
06/1993 - 8/1996	National Institute of Standards and Technology, Physics Laboratory, Guest Researcher.
6/1991 - 8/1993	University of Maryland Baltimore County, Department of Physics, Faculty Research Associate.
9/1990 - 5/1991	University of Maryland College Park, Department of Physics and Astronomy, Visiting Professor.
4/1987 - 8/1991	Moscow State University, Physics Department, Assistant Professor.
2/1981 - 3/1987	Moscow State University, Physics Department, Faculty Research Assistant.

Professional Societies:

Associate Editor Quantum Information – Physical Review Letters
Associate Editor Quantum Photonics – Journal of Optics
Optical Society of America – Fellow
American Physical Society
SPIE, IEEE\LEOS

Honors:

2021 Distinguished Associate Member of TÜBITAK Research Institute for Fundamental Sciences, Turkey.
2010 Outstanding Referee - American Physical Society
2004 Fellow of the Optical Society of America
2001 Professor of the Year Award in Recognition of Excellence in Teaching, College of Engineering, Boston University.
1999 NSF CAREER award.

Professional Activities:

Teaching Experience: "Optical Measurement" (SC764), "Introduction to Photonics" (EC560) "Quantum Optics" (SC762), for graduate students, "Analog Electronics" (SC412), "Introduction to Electronics" (SC410), "Electrical Circuit Theory" (EK307), for undergraduate students at Boston University. "Electromagnetic Theory" for undergraduate students at the University of Maryland Baltimore County. "Basic Radiophysics" at the undergraduate level at Moscow State University. "Laser Spectroscopy" and "Nonlinear Optics" at the graduate level at Moscow State University. Initiated and supervised a graduate student laboratory on "Laser Spectroscopy".

Degree students supervised:

Ph.D. (current employment)
Shuto Osawa (2021) (Industry)
John Snyder (2020) (Industry)
Mackenzie Van Camp (2017) (BAE)
Casey Fitzpatrick (2017) (Industry)
Andrew Fraine (2015) (Industry)
Roman Egorov (2012) (Verizon)
David Simon (2010) (Professor, Stonehill College, MA)
Olga Minaeva (co-advisor) (2009) (Assistant Professor, Medical School, Boston University)
Cristian Bonato (co-advisor) (2008) (Professor, University of Edinburgh, UK)
Zachary D. Walton (2004) (Industry)
Kimani C. Toussaint, Jr. (2004) (Professor, Brown University, RI)
Mete Atature (2001) (Professor, University of Cambridge, UK)
Todd Pittman (1995) (co-advisor) (Professor, University of Maryland, Baltimore County)

M.S.
Christopher Sataline (2013)

Andrew Fraine (2012)
David Simon (2009)
Joshua Spitzberg (2008)
Alvin Stern (2006)
Oleksiy Pikalo (2005)
Kenneth Bycenski (2004)
David Gervais (2004)
Brian Imhausen (2004)
Patrick Stone (2003)
Matthew Shaw (2002)
Ying-Tsang (Falcon) Liu (2002)
George Bevis (1999)

Research Interests:

- Quantum information, quantum communication and cryptography, quantum networking, room-temperature linear-optical quantum computing;
- Quantum computing and simulation of complex Hamiltonians of physical and chemical structures;
- Topological manipulation of quantum information; Error-resistant quantum information processing and computing based on joint entanglement in topology and polarization;
- Ultra-precise optical measurement in science and technology (Quantum Metrology), Quantum sensors with attosecond (in time) and nanometer (in space) sensitivity based on quantum interferometry;
- Propagation of optical signals in telecommunication fiber networks;
- Polarization and chromatic dispersion compensation of telecommunication signals;
- Precise characterization of telecommunication network elements including all-optical wavelength selective switches (WSS).
- Optical microscopy, multi-spectral imaging, confocal and fluorescence microscopy;
- Quantum and correlation imaging, aberration-free imaging and microscopy in life sciences;
- Integrated micro-and nano-photonics, quantum on-chip circuits, Quantum state engineering using parametric amplification in periodically polled nonlinear structures, entanglement manipulation and processing on a chip;
- High-performance single-photon detection and correlation measurement in a wide spectral range from ultraviolet to mid-infrared;
- "Quantum Inspired" optical engineering and technology - building robust and efficient classical correlation tools inspired by the flexibility and information capacity of quantum entanglement.

Research Experience: Experimental quantum optics and quantum information processing, bio-photonics, ultra-precise optical measurement (quantum metrology), multi-spectral imaging and correlation spectroscopy. Laser physics and nonlinear optics of continuous wave and pulsed processes, parametric optical amplifiers and oscillators, ultrafast single photon detection and remote laser sensing, correlation spectroscopy and quantum radiometry in visible and infrared spectrum.

Research Support:

More than $13M in current and completed research projects.

Patents:

1. David Simon, Alexander Sergienko, Lee Edvin Goldstein, and Robert H. Webb "Correlation Confocal Microscope", U.S. Patent Number US 8,829415 B2, September 9, 2014.

2. R. Wolleschensky M. Kempe, Magued B. Nasr, A. F. Abouraddy, M. C. Booth, B. E. A. Saleh, A. V. Sergienko, and M. C. Teich, "Methods and Systems for Microscopic Imaging" International Patent application WO 03/0606120. Pending.

3. M. C. Teich, B. E. A. Saleh, A. V. Sergienko, J. T. Fourkas, R. Wolleschensky, M. Kempe, and M. C. Booth, "High-Flux Entangled Photon Generation via Parametric Processes in a Laser Cavity," U.S. Patent Number 6,982,822, January 3, 2006.

4. Teich, Malvin C.; Saleh, Bahaa E A.; Sergienko, Alexander V.; Abouraddy, Ayman F.; Nasr, Magued B., "Quantum Optical Coherence Tomography Data Collection Apparatus and Method for Processing Therefore", United States Patent 6882431, April 19, 2005.

5. K. C. Toussaint, A. F. Abouraddy, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Entangled Photon Ellipsometry", US Patent No. 6,822,739, November 24 2004.

6. A. V. Sergienko, B. E. A. Saleh, M. C. Teich, S. J. Bielagus, M. J. Merhar, ''Polarization Mode Dispersion Characterization Apparatus and Method'' US Patent No. 6,646,727 November 11, 2003.

7. D. N. Klyshko, A. A. Malygin, A. N. Penin, A. V. Sergienko, G. Kh. Kitaeva, M. V. Chekhova and S. P. Kulik "A Method for the Measurement of Spatial Distribution of Photodetectors Absolute Sensitivity and Device for Its Realization", Russia Patent No. 2030715, March 10, 1995.

8. G. Kh. Kitaeva, A. N. Penin, A. V. Sergienko, and A. V. Shepelev "A Method for the Measurement of Time Parameters of Optical Processes and Photoelectric Devices", USSR Patent No. 51533534, September 1, 1989.

Publications:

"H-Index" = 59 (Google Scholar) (20864 citations)

Books:

1. Gregg Jaeger, David S. Simon, Alexander V. Sergienko, Daniel Greenberger, and Anton Zeilinger "Quantum Arrangements", Springer, New York, (2021)

2. David S. Simon, Gregg Jaeger, and Alexander V. Sergienko "Quantum Metrology, Imaging, and Communication", Springer, New York, ISBN: 978-3-319-46549-4 (2017).

3. Alexander Sergienko, Saverio Pascazio, and Paolo Villoresi, (Eds.) "Quantum Communication and Quantum Networking", Springer, New York, ISBN 978-3-642-11730-5 (2009).

4. Alexander V. Sergienko ed. "Quantum Communications and Cryptography", CRC Press, Taylor & Francis Group, New York, ISBN 0-8483-3684-8, (2006).

Book Chapters:

1. David Simon, Gregg Jaeger and Alexander V. Sergienko. "Quantum Information In Communication and Imaging", International series on Modern Physics, World Scientific, Singapore, (2013).

2. Zachary D. Walton, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Noise-Immune Quantum Key Distributions", in "Quantum Communications and Cryptography", CRC Press, Taylor & Francis Group, New York, ISBN 0-8483-3684-8, (2006).

3. Alexander V. Sergienko "Quantum Measurement With Entangled-Photon States", in "Quantum Information Processing & Communications in Europe", European Communities Publication Office, Brussels, November (2005). ISBN 92-894-8924-3 [http://www.cordis.lu/ist/fet/qipc-eu.htm]

4. A. V. Sergienko, G. S. Jaeger, G. Di Giuseppe, B. E. A. Saleh, and M. C. Teich "Quantum Information Processing and Precise Optical Measurement With Hyper-Entangled Quantum States", in NATO Advance Study Institute "Quantum Communication and Information Technologies", Ankara, Turkey, June 2002, Kluwer Academic Publishers, Dordrecht, ISBN 1-4020-1453-8 (2003), pp. 13-46.

5. A. V. Sergienko "Quantum Metrology With Entangled Photons", in CXLVI International School of Physics "Enrico Fermi", T. J. Quinn, S. Leschiutta, and P. Tavella (Eds.), IOS Press, Amsterdam ISBN 1 58603 167 8 (2001), pp. 715-746.

6. G. S. Jaeger and A. V. Sergienko "Multi-Photon Quantum Interferometry", in E. Wolf, "Progress in Optics" 42, Elsevier Science B.V. ISBN 0 444 50908 9 (2001), pp. 277-324.

Submitted:

Accepted for publication:

Publications in Refereed Journals:

1. Jun-Hee Park, Jeongho Ha, Liyi Hsu, Guang Yang, Yeshaiahu Fainman, Alexander V Sergienko, Abdoulaye Ndao "Observation of robust subwavelength phase singularity in chiral medium", *Advanced Photonics* **v.7 (3)**, 035001 (2025).

2. Christopher R. Schwarze, Anthony D. Manni, David S. Simon, Abdoulaye Ndao, and Alexander V. Sergienko, "Grover–Sagnac interferometer," *J. Opt. Soc. Am. A* **42**, 290-297 (2025).

3. C. R. Schwarze, D. S. Simon, A. D. Manni, A. Ndao, and A. V. Sergienko, "Experimental demonstration of a Grover-Michelson interferometer", *Optics Express*, v.32, p. 34116-34127 (2024).

4. C. R. Schwarze, A. D. Manni, D. S. Simon, and A. V. Sergienko, "Single-photon description of the lossless optical Y coupler. " *Physical Review A* **110**, 023527 (2024).

5. S. Hemayat, S. Moayed Baharlou, A. Sergienko, and A. Ndao, "Integrating deep convolutional surrogate solvers and particle swarm optimization for efficient inverse design of plasmonic patch nanoantennas", *Nanophotonics,* 13(21), 3963-3983 (2024).

6. D. S. Simon, C. R. Schwarze, A. Ndao, and A. V. Sergienko, "Exceptional points in SSH-like models with a hopping amplitude gradient", *Journal of the Optical Society of America B* **v.41**, 1847-1855 (2024).

7. C. R. Schwarze, D. S. Simon, A. D. Manni, A. Ndao, and A. V. Sergienko, "Finite-element assembly approach of optical quantum walk networks, " *J. Opt. Soc. Am. B* **v.41**, 1304-1316, (2024).

8. C. R. Schwarze, D. S. Simon, A. Ndao, and A. V. Sergienko, "Tunable linear-optical phase amplification, " *Physical Review A* **109**, 053508 (2024).

9. Muhammad Waleed Khalid, Ali Akbar, Jeongho Ha, Mohammed Salah El Hadri, Alexander V Sergienko, Eric E Fullerton, Abdoulaye Ndao "Role of photonic angular momentum in all-optical magnetic switching", *Physical Review B* 109 (14), L140403 (2024).

10. Muhammad Waleed Khalid, Jeongho Ha, Mohammed Salah El Hadri, Liyi Hsu, Saeed Hemayat, Yuxuan Xiao, Alexander Sergienko, Eric E. Fullerton, and Abdoulaye Ndao, "Meta-Magnetic All-Optical Helicity Dependent Switching of Ferromagnetic Thin Films" *Advanced Optical Materials*, v.12, 2301599 (2023).

11. Weijun Luo, Alexander A. Puretzky, Benjamin J. Lawrie, Qishuo Tan, Hongze Gao, Zhuofa Chen, Alexander V. Sergienko, Anna K. Swan, Liangbo Liang, and Xi Ling "Deterministic Localization of Strain-Induced Single-Photon Emitters in Multilayer GaSe", *ACS Photonics* **v.10**, 2530-2539 (2023).

12. Christopher R. Schwarze, David S. Simon, and Alexander V. Sergienko, "Enhanced-sensitivity interferometry with phase-sensitive unbiased multiports ", *Phys. Rev. A* **106**, 052615 (2023).

13. D. S. Simon, C. R. Schwarze, and A. V. Sergienko, "Interferometry and higher-dimensional phase measurements using directionally unbiased linear optics" *Phys. Rev. A* 106, 033706 (2022).

14. Guang Yang, Alexander V. Sergienko, and Abdoulaye Ndao "Plasmonic loss-mitigating broadband adiabatic polarizing beam splitter", *Optics Letters* **v. 47**, 629-632 (2022).

15. Shuto Osawa, David S. Simon, Vladimir S. Malinovsky, and Alexander V. Sergienko "Controllable entangled-state distribution in a dual-rail reconfigurable optical network" *Phys. Rev. A* **104**, 012617 (2021).

16. Guang Yang, Alexander V. Sergienko, and Abdoulaye Ndao "Tunable polarization mode conversion using thin-film lithium niobate ridge waveguide'', *Optics Express*, **v. 29**, 18582 - 18588 (2021).

17. Shuto Osawa, David S. Simon, and Alexander V. Sergienko "Higher-Dimensional Hong-Ou-Mandel Effect and State Redistribution With Linear-Optical Multiports", *Phys. Rev. A* **102**, 063712 (2020).

18. David Simon, Shuto Osawa, and Alexander V. Sergienko,''Quantum-Clustered Two-Photon Walks'', *Phys. Rev. **A*** **101**, 032118 (2020).

19. Shuto Osawa, David S. Simon, and Alexander V. Sergienko "Directionally-Unbiased Unitary Optical Devices in Discrete-Time Quantum Walks", *Entropy*, **v. 21**, p. 853 (2019).

20. Gregg Jaeger, David S. Simon, and Alexander V. Sergienko, ''Topological Qubits as Carriers of Quantum Information in Optics'', *Applied Sciences* **v. 9**, p. 575 (2019).

21. David S. Simon, Shuto Osawa, Alexander V. Sergienko,"Topological Boundaries and Bulk Wavefunctions in the Su-Schreiffer-Heeger Model" *Journal of Physics: Condensed Matter* **v. 31**, 045001 (2019).

22. Shuto Osawa, David S. Simon, and Alexander V. Sergienko " Experimental demonstration of a directionally-unbiased linear-optical multiport" *Optics Express*, **v. 26**, pp. 27201-27211 (2018).

23. David S. Simon, Shuto Osawa, Alexander V. Sergienko " Joint Entanglement of Topology and Polarization Enables Error-Protected Quantum Registers *"*, *New Journal of Physics*, **v. 20**, 093032 (2018).

24. D. Simon, C. A. Fitzpatrick, S. Osawa and Alexander V. Sergienko, ''Quantum Simulation of Topologically Protected States Using Directionally Unbiased Linear-Optical Multiports'', *Physical Review A* **v. 96**, 013858 (2017).

25. D. S. Simon, C. A. Fitzpatrick, S. Osawa and Alexander V. Sergienko, ''Quantum Simulation of Discrete-Time Hamiltonians Using Directionally-Unbiased Linear Optical Multiports,'' *Physical Review A* **v. 95**, 042109 (2017).

26. Abu Thomas, Mackenzie Van Camp, Olga Minaeva, David Simon, and Alexander V. Sergienko, ''Spectrally Engineered Broadband Photon Source For Two-Photon Quantum Interferometry'', *Optics Express*, **v. 24**, pp. 24947- 24958 (2016).

27. David S. Simon, Casey Fitzpatrick, and Alexander V. Sergienko, ''Group Transformations and Entangled-State Quantum Gates With Directionally-Unbiased Linear-Optical Multiports,'' *Physical Review A*, **v.93**, 043845 (2016).

28. Greg Jaeger, David Simon, and Alexander V. Sergienko ''Coherent State Quantum Key Distribution Based on Entanglement Sudden Death, ''*Quantum Information Processing*, **v. 15**, pp. 1117-1133 (2016).

29. David S. Simon, Casey Fitzpatrick, and Alexander V. Sergienko, ''Discrimination and Synthesis of Recursive Quantum States in High-Dimensional Hilbert Spaces'', *Physical*

Review A, **v. 91***,* 043806 (2015).

30. Casey A. Fitzpatrick, David S. Simon, and Alexander V. Sergienko ''High-Capacity Imaging and Rotationally Insensitive Object Identification With Correlated Orbital Angular Momentum States'', *International Journal of Quantum Information*, **v.13**, 1560013, (2015).
31. Gregg S. Jaeger and Alexander V. Sergienko ''Entanglement Sudden Death: a Threat to Advanced Quantum Key Distribution?'' *Natural Computing,* **v. 13**, pp. 459-467 (2014).
32. Alexander V. Sergienko, Néstor Uribe-Patarroyo, Andrew Fraine, David S. Simon, and Olga Minaeva ''Efficient Identification of Objects Carrying Elements of High-Order Symmetry By Using Correlated Orbital Angular Momentum (OAM) States,'' European Physical Journal, EPJ Web of Conferences **v. 78**, 01008 (2014).
33. David Simon, Gregg Jaeger, and Alexander Sergienko ''Quantum information in communication and imaging, '' *International Journal of Quantum Information*, **v.12**, 143004 (2014).
34. David S. Simon and Alexander V. Sergienko, ''High Capacity Quantum Key Distribution via Hyperentangled Degrees of Freedom'', *New Journal of Physics*, **v.16**, 063052 (2014).
35. David S. Simon, Gregg Jaeger, and Alexander V. Sergienko, ''Entangled-Coherent-State Quantum Key Distribution with Entanglement Witnessing'', *Physical Review A*, **v. 89**, 012315 (2014).
36. Luca Mazzarella, Francesco Ticozzi, Alexander V. Sergienko, Giuseppe Vallone, Paolo Villoresi, ''Asymmetric Architecture for Heralded Single Photon Sources'', *Physical Review A*, **v. 88**, 023848 (2013).
37. Gregg Jaeger, David Simon, and Alexander V. Sergienko, ''Implications of Disentanglement and Locality Induction for Quantum Information Processing and Cryptography, '' *Quantum Matter* **v. 2**, 427-435 (2013).
38. Carsten Schuck, Wolfram H. P. Pernice, Olga Minaeva, Mo Li, Gregory Gol'tsman, Alexander V. Sergienko, and Hong X. Tang, ''Matrix of integrated superconducting single-photon detectors with high timing resolution'', *IEEE Transactions on Applied Superconductivity*, **v. 23**, No 3, 2201007 (2013).
39. David S. Simon, Nate Lawrence, Jacob Trevino, Luca Dal Negro, Alexander V. Sergienko, ''High-capacity quantum Fibonacci coding for key distribution'' *Physical Review A*, **v. 87**, 033212 (2013).
40. M. Minozzi, S. Bonora, A. V. Sergienko, G. Vallone, and P. Villoresi, ''Optimization of Two-Photon Wavefunction in Parametric Down Conversion by Adaptive Optics Control of the Pump Radiation''. *Optics Letters,* **v. 38**, No. 4, pp. 489-491 (2013).
41. Nestor Uribe-Patarroyo, Andrew Fraine, David S. Simon, Olga Minaeva, Alexander V. Sergienko, ''Object identification using correlated orbital angular momentum states'' *Physical Review Letters*, **v.110**, 043601 (2013).
42. Pernice, C. Schuck, O. Minaeva, M. Li, G.N. Goltsman, A.V. Sergienko, H. X. Tang, ''High-speed and high-efficiency travelling wave single-photon detectors embedded in nanophotonic circuits'', *Nature Communications* ***v. 3***, 1325, (2012).
43. Fraine, O. Minaeva, D.S. Simon, R. Egorov, and A.V. Sergienko, ''Broadband source of polarization entangled photons'' *Optics Letters*, **v. 37,** No. 11, pp. 1910-1912 (2012).

44. David S. Simon and Alexander V. Sergienko, ''Two-Photon Spiral Imaging with Correlated Orbital Angular Momentum States'', *Physical Review A* **v. 85**, 043825 (2012).
45. A. Fraine, O. Minaeva, D.S. Simon, R. Egorov, and A.V. Sergienko, ''Evaluation of Polarization Mode Dispersion in a Telecommunication Wavelength Selective Switch Using Quantum Interferometry'', *Optics Express*, **v. 20**, No. 3, pp. 2025-2033 (2012).
46. A. Fraine, D.S. Simon, O. Minaeva, R. Egorov, and A.V. Sergienko, ''Precise evaluation of polarization mode dispersion by separation of even- and odd-order effects in quantum interferometry,'' *Optics Express* **v. 19**, No. 21, pp.22820-22836 (2011).
47. Kam Wai Clifford Chan, D. S. Simon, A. V. Sergienko, Nicholas D. Hardy, Jeffrey H. Shapiro, P. Ben Dixon, Gregory A.Howland, John C. Howell, Joseph H. Eberly, Malcolm N. O'Sullivan, Brandon Rodenburg, and Robert W. Boyd ''Theoretical analysis of quantum ghost imaging through turbulence,'' *Physical Review A* ***v.*84**, 043807 (2011).
48. P. Ben Dixon, Gregory Howland, Kam Wai Clifford Chan, Colin O'Sullivan-Hale, Brandon Rodenburg, Nicholas D. Hardy, Jeffrey H. Shapiro, D. S. Simon, A. V. Sergienko, R. W. Boyd, John C. Howell, ''Quantum Ghost Imaging through Turbulence'', *Physical Review A Rapid Communications* **v. 83**, 051803 (2011).
49. D. S. Simon and A. V. Sergienko ''Correlated-Photon Imaging with Cancellation of Object-Induced Aberration'', *J. Opt. Soc. Am. B*, **v. 28**, pp. 247-252 (2011).
50. D. S. Simon and A. V. Sergienko "Twin-Photon Confocal Microscopy", *Optics Express* **v. 18,** No. 21, pp. 22147–22157 (2010).
51. D. S. Simon and A. V. Sergienko ''Odd-order Aberration-Cancellation in Correlated-Photon Imaging'', *Physical Review A* **v. 82**, 023819 (2010).
52. D. S. Simon and A. V. Sergienko, ''The Correlated Confocal Microscope'', *Optics Express* **v. 18,** pp. 9765–9779 (2010).
53. D. S. Simon and A. V. Sergienko ''Spatial Dispersion Cancellation in Quantum Interferometry'', *Physical Review A* **v. 80**, 053813 (2009).
54. N. Mohan, O. Minaeva, G. N. Goltsman, M. F. Saleh, M. B. Nasr, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, ''Ultra-Broadband Coherence-Domain Imaging Using Parametric Downvonversion and Superconducting Single-Photon Detectors at 1064 nm,'' *Appl. Optics* **v. 48**, 4009-4017 (2009).
55. Cristian Bonato, David S. Simon, Paolo Villoresi, and Alexander V. Sergienko, ''Multiparameter Entangled-State Engineering Using Adaptive Optics'', *Physical Review A* **v. 79**, 062304 (2009).
56. Olga Minaeva, Cristian Bonato, Bahaa E. A. Saleh, David S. Simon, and Alexander V. Sergienko, "Odd- and Even-Order Dispersion Cancellation in Quantum Interferometry", *Physical Review Letters,* **v. 102**, 100504 (2009).
57. Cristian Bonato, Alexander V. Sergienko, Bahaa E. A. Saleh, Stefano Bonora, and Paolo Villoresi, "Even-Order Aberration Cancellation in Quantum Interferometry'', *Physical Review Letters*, **v. 101**, 233603 (2008).
58. D. S. Simon, A. V. Sergienko, and T. B. Bahder, ''Dispersion and Fidelity in Quantum Interferometry'', *Physical Review A* **v. 78**, 053829 (2008).

59. M. C. Teich, M. B. Nasr, S. Carrasco, B. E. A. Saleh, A. V. Sergienko, J. P. Torres, L. Torner, D. S. Hum, M. M. Fejer ''Ultra-Broadband Biphotons Chirped QPM Down-conversion'', *Optics and Photonics News*, p. 36 December (2008).

60. Nishant Mohan, Olga Minaeva, Gregory N. Gol'tsman, Magued B. Nasr, Bahaa E.A. Saleh, Alexander V. Sergienko, and Malvin C. Teich ''Photon-Counting Optical Coherence-Domain Reflectometry Using Superconducting Single-photon Detectors'', *Optics Express,* **v. 16**, 18118 (2008).

61. Magued B. Nasr, Olga Minaeva, Gregory N. Goltsman, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich "Submicron axial resolution in an ultrabroadband two-photon interferometer using superconducting single-photon detectors", *Optics Express*, **v. 16**, 15104, (2008).

62. Magued B. Nasr, Bahaa E. A. Saleh, Alexander V. Sergienko, Silvia Carrasco, Malvin C. Teich, Juan P. Torres, Lluis Torner, David S. Hum, and Martin M. Fejer ''Quasi-Phase-Matched Optical Parametric Down-Conversion'', *Physical Review Letters* **v. 100**, 183601 (2008).

63. Alexander V. Sergienko, "Beyond Singe-Photon Counting", *Nature Photonics,* **v. 2**, pp.268-269 (2008).

64. Cristian Bonato, Paolo Villoresi, and Alexander V. Sergienko, ''Two-photon spectral coherence matrix and characterization of multi-parameter entangled states'', *Physics Letters A*, **v. 372**, pp.3109-3117 (2008).

65. Gregg Jaeger and Alexander Sergienko, "Constructing Four-Photon States for Quantum Communication and Information Processing", *International Journal of Theoretical Physics*, **v. 47**, pp.2120-2125 (2008)

66. H. Guillet de Chatellus, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Non-collinear and Non-degenerate Polarization-Entangled Photon Generation via Concurrent Type-I Parametric Downconversion in PPLN", *Optics Express,* **v. 14**, 10060-10072 (2006).

67. Fabio A. Bovino, Giuseppe Castagnoli, Artur Ekert, Pawel Horodecki, Carolina Moura Alves, and Alexander V. Sergienko, "Direct Measurement of Bipartite Quantum States", *Open Systems & Information Dynamics*, v. 13, 281-289 (2006).

68. Mark C. Booth, Bahaa E. A. Saleh, Alexander V. Sergienko, and Malvin C. Teich "Temperature and wavelength dependence of Fermi-tail photoemission and two-photon photoemission from multialkali semiconductors", *Journal of Applied Physics,* **v. 100**, 023521 (2006).

69. S. Carrasco, A. V. Sergienko, B. E. A. Saleh, M. Teich, J. P. Torres and L. Torner "Spectral engineering of entangled two-photon states", *Physical Review A*, **v. 73**, 063802 (2006).

70. S. Carrasco, M. B. Nasr, A. V. Sergienko, B. E. A. Saleh, M. Teich, J. P. Torres and L. Torner "Broadband Light Generation by Noncollinear Parametric Down-Conversion", *Optics Letters*, **v. 31**, pp. 253-255 (2006).

71. Fabio A.. Bovino, Giuseppe Castagnoli, Artur Ekert, Pawel Horodecki, Carolina Moura Alves, and Alexander V. Sergienko, "Direct Measurement of Nonlinear Properties of Bipartite Quantum States", *Physical Review Letters*, **v. 95**, 240407 (2005).

72. Bahaa E. A. Saleh, Malvin C. Teich, and Alexander V. Sergienko, "Wolf Equations for Two-Photon Light", *Physical Review Letters*, **v. 94**, 223601 (2005).

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Publications in Conference Proceedings:

1. I. Perez Gamiz, A. D. Manni, C.R. Schwarze, D.S. Simon, A. Ndao, A.V. Sergienko ''Directionally unbiased nanophotonic waveguide multiports for integrated quantum photonics applications", SPIE Optics+Photonics, San Diego, CA, August 18-22 (2024).

2. A.V. Sergienko, D.S. Simon, A. Manni, C. Schwarze, A. Ndao ''Higher-dimensional HOM effect with directionally unbiased linear-optical multiports enable entangled

state routing in quantum networks'', SPIE Optics+Photonics, San Diego, CA, August 18-22 (2024). **(Invited)**

3. S.M. Baharlou, S. Hemayat, A. Sergienko, A. Ndao ''Parallel GDS: parallelized and memory-independent layout generation framework for arbitrarily large metadevices'' SPIE Optics+Photonics, San Diego, CA, August 18-22 (2024).

4. D. Simon, C. Schwarze, and A. Sergienko ''Directionally-unbiased Linear Multiports: Quantum Interference of Multi-Dimensional Rotation'', Quantum 2.0, Rotterdam, Netherlands June 23-27 (2024).

5. C. Schwarze, D. Simon, S. Osawa, and A. Sergienko ''Higher-dimensional HOM effect with directionally unbiased linear-optical multiports enable entangled state routing in quantum networks'', Quantum 2.0, Rotterdam, Netherlands, June 23-27 (2024).

6. C. Schwarze, D. Simon, A. Ndao, and A. Sergienko ''Super-resolution interferometric phase measurement with directionally-unbiased linear-optical devices'', CLEO San Francisco, CA, May 5-10 (2024).

7. C. Schwarze, D. Simon, S. Osawa, and A. Sergienko ''Higher-dimensional HOM effect with directionally unbiased linear-optical multiports enable entangled state routing in quantum networks'', CLEO San Francisco, CA, May 5-10 (2024).

8. A.V. Sergienko, C. Schwarze, S. Osawa, D. Simon, ''Directionally-unbiased linear optics enables efficient sensors and quantum network routing,'' Quantum 2023, Turin, Italy, Sept. 19-15 (2023). **(Invited)**

9. S. Osawa, C. Schwarze, D. Simon, and A. Sergienko ''Higher-Dimensional Hong-Ou-Mandel Effect with Linear-Optical Grover Multiports'' Central European Workshop on Quantum Optics, CEWQO 2023, July 3-7 (2023).

10. S. Osawa, C. Schwarze, D. Simon, and A. Sergienko ''Higher-Dimensional Hong-Ou-Mandel Effect with Linear-Optical Grover Multiports'' CLEO-Europe, Munich, Germany, June 25-30 (2023).

11. Guang Yang, Alexander V. Sergienko, and Abdoulaye Ndao “Plasmonic Mode Assisted Broadband Adiabatic Light Transfer and Polarizing Beam Splitting”, CLEO, San Jose, CA, May 7-12 (2022).

12. Alexander V. Sergienko ''Attosecond-resolution optical path evaluation and sensing using quantum optical interferometry with dispersion cancellation'', SPIE Photonics West 2020, San Francisco, CA February 1-5 (2020). **(Invited)**

13. Alexander V. Sergienko, David Simon, and Shuto Osawa ''Noise-resistant quantum-optical information processing via joint topological and polarization entanglement'', SPIE Optics+Photonics, San Diego, CA, August 11-15 (2019). **(Invited)**

14. Shuto Osawa, David Simon, and Alexander V. Sergienko, ''Practical implementation of higher-dimensional scattering quantum walks using directionally-unbiased linear-optical devices'', SPIE Optics+Photonics, San Diego, CA, August 11-15 (2019).

15. John W. Snyder, Alexander V. Sergienko, ''Titanium-diffused high resolution periodically poled lithium niobate waveguides for strongly nondegenerate quantum frequency conversion", SPIE Optics+Photonics, San Diego, CA, August 11-15 (2019).

16. Alexander V. Sergienko, David Simon, and Shuto Osawa, "Joint Topological and Polarization Entanglement in Quantum Photonics Information Processing," International Conference on Coherence and Quantum Optics (CQO-XI), University of Rochester, NY, August 4-8, (2019). **(Invited).**

17. Alexander V. Sergienko, David S. Simon, and Shuto Osawa, ''Joint Topological and Polarization Entanglement Enables Noise-Resistant Optical Information Processing'', CLEO-Europe 2019, Munich, Germany, June 23-27 (2019).

18. Alexander V. Sergienko, David S. Simon, and Shuto Osawa, ''New Linear-Optical Approach to Quantum Information Processing and Quantum Simulation'', Central European Quantum Optics Workshop, Paderborn, Germany, June 3-7 (2019)

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21. Shuto Osawa, David S. Simon, and Alexander V. Sergienko, ''Practical Implementations of Photonic Quantum Walks on Graphs'' APS Annual meeting, Boston, MA, March 4-8 (2019).

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23. S. Osawa, David S. Simon, and Alexander V. Sergienko, ''Experimental Implementation of Directionally-Unbiased Linear-Optical Multiport'' FiO + LS 2018, Washington, DC, September 16-20 (2018).

24. John W. Snyder and Alexander V. Sergienko ''Small-Period Titanium-Diffused Periodically Poled Lithium Niobate Waveguides for Strongly Nondegenerate Quantum Frequency Conversion", FiO + LS 2018, Washington, DC, September 16-20 (2018).

25. Alexander V. Sergienko, David S. Simon, S. Osawa ''Speed-up of Machine Learning Using Linear-Optical Quantum Random Walks on Graphs'' Deep Learning Workshop Genoa, Italy July 23-27 (2018).

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(Invited).

27. Alexander V. Sergienko, David S. Simon, S. Osawa, and Casey Fitzpatrick, ''Quantum Simulation of complex Physical Systems using Directionally Unbiased Linear-Optical Multiports'', International Quantum Simulation and Computing Workshop, University of Bilbao, Spain, February 12-16 (2018).

28. Alexander V. Sergienko, David S. Simon, S. Osawa, and Casey Fitzpatrick, ''Quantum Simulation for Machine Learning with Directionally Unbiased Linear-Optical Multiports'', Quantum Techniques in Machine Learning – QTML 2017, Verona, Italy November 6-8 (2017).

29. Alexander V. Sergienko, David S. Simon, S. Osawa, and Casey Fitzpatrick, ''Quantum Simulation of Physical Systems with Directionally Unbiased Linear-Optical Multiports'', OSA FiO 2017 Conference, Washington, DC, September 18-21 (2017). **(Invited).**

30. ''Quantum Simulation of Discrete Hamiltonians with Directionally Unbiased Linear-Optical Multiports'', International Quantum Information Conference, IQIS 2017 Florence, Italy, September 12-15 (2017). **(Invited)**

31. Alexander V. Sergienko, David S. Simon, S. Osawa, and Casey Fitzpatrick, ''Quantum Simulation of Physical Systems with Directionally Unbiased Linear-Optical Multiports'', LPHYS'17, Kazan, Russia, July 17-21 (2017). **(Invited)**

32. Alexander V. Sergienko, David S. Simon, S. Osawa, and Casey Fitzpatrick, ''Quantum Simulation of Discrete Hamiltonians with Directionally Unbiased Linear-Optical Circuits'', CLEO-Europe /EQEC 2017, Munich, Germany, June 25-29 (2017).

33. Alexander V. Sergienko, David S. Simon, Casey Fitzpatrick, ''Quantum Simulation With Directionally Unbiased Linear-Optical Multiports'', CLEO 2017, San Jose, California, May 15-19 (2017).

34. Alexander V. Sergienko, David S. Simon, Casey Fitzpatrick, ''Directionally Unbiased Linear-Optical Multiports for Quantum Information processing'', Boston Photonics Centennial Conference, Harvard University, Cambridge, MA, February 25 (2017).

35. David S. Simon, Casey Fitzpatrick, and Alexander V. Sergienko, ''Quantum Simulation of Complex Systems with Directionally Unbiased Linear-Optical Multiports'', DOE Workshop on Quantum Computing, Washington, DC, February 14-16 (2017).

36. Alexander V. Sergienko, Abu Thomas, Mackenzie Van Camp, Olga Minaeva, "High-resolution interferometric quantum sensing with spectrally engineered broadband entanglement," OSA Laser Congress, Boston, MA, October 30 – November 3 (2016). **(Invited)**

37. V. Sergienko, D. S. Simon, C. A. Fitzpatrick "Entangled-State Quantum Gates With Directionally Unbiased Linear-Optical Multiports, " OSA Frontiers in Optics, 100th OSA Annual Meeting, Rochester, NY, October 17-21 (2016).

38. D. S. Simon, C. A. Fitzpatrick, and A. V. Sergienko, "Symmetry-Based Directionally-Unbiased Multiports for Quantum Walks and Quantum Information Processing", Gordon research conference on Quantum Science - Quantum Entanglement, New States of Matter, and Correlated Dynamics, July 31 – August 5 (2016).

39. V. Sergienko, "Detecting Elements of Symmetry for Object Identification Using High-Dimensional Spatial Correlations in OAM Basis", LPHYS'16, Yerevan, Armenia, July 11-15 (2016). **(Invited)**

40. Abu Thomas, Olga Minaeva, and Alexander Sergienko, "Engineering Frequency-Correlated Two-Photon States Using Parametric Down-Conversion in Integrated-Optic Nonlinear Waveguide", CLEO CLEO-QELS 2016, San Jose, CA, June 5-10 (2016).

41. Mackenzie Van Camp, Abu Thomas, and Alexander Sergienko, "Waveguided source of broadband entangled photons for quantum interferometry and sensing", CLEO-QELS 2016, San Jose, CA, June 5-10 (2016).

42. Alexander V. Sergienko, "Designing non-trivial QPM spectral shapes in Titanium in-diffused PPLN", SPIE Photonics West, San Francisco, CA, February 13-18 (2016). **(Invited)**

43. Abu Thomas, Mackenzie A. Van Camp, Andrew Fraine, Alexander V. Sergienko, "Low-noise Quantum Frequency Conversion in Titanium-diffused Lithium Niobate waveguide", Optical Society of America FiO/LS – 2015, San Jose, California, October 18-22 (2015).

44. Alexander Sergienko, "Second Order Nonlinear Processes and Linear Optics Circuits for Quantum Information Processing on a Chip", US-Italy Workshop "Quantum Information on a chip", University of Padova, October 12-14 (2015). **(Invited)**

45. D. S. Simon, C. A. Fitzpatrick, and A. V. Sergienko, "High Capacity Quantum Communication Protocols - Engineering Entangled States in High-Dimensional Hilbert Space", Conference of Quantum Information and Quantum Control, University of Toronto, Canada, August 17-21 (2015).

46. D. S. Simon, C. A. Fitzpatrick, and A. V. Sergienko, "Physical implementation of high-dimensional quantum states for communication and information processing", Third International Conference on Orbital Angular Momentum, New York, NY August 4-7 (2015).

47. Alexander V. Sergienko, Nestor Uribe-Patarroyo, Andrew Fraine, David Simon, Olga Minaeva "High information capacity image identification using correlated orbital angular momentum (OAM) states, " Third International Conference on Orbital Angular Momentum, New York, NY August 4-7 (2015). **(Invited)**

48. V. Sergienko, D. S. Simon, C. Fitzpatrick, and O. Minaeva "High Capacity Fibonacci Protocol for Quantum Communication", CLEO-Europe/ QELS 2015, Munich, Germany, June 20-25 (2015).

49. V. Sergienko, D. S. Simon, C. Fitzpatrick, and O. Minaeva "High Capacity Fibonacci

Protocol for Quantum Communication - Engineering Entangled States in High-Dimensional Hilbert Space", First International Workshop for Quantum Repeaters and Networks, Monterey, California, May 15-18 (2015).

50. Alexander V. Sergienko, Nestor Uribe-Patarroyo, Andrew Fraine, Casey Fitzpatrick, David Simon, Olga Minaeva, "High Information Capacity Image Recognition Using Correlated Orbital Angular Momentum (OAM) States", Frontiers in Optics/Laser Science 2014 OSA, Tucson, Arizona, October 19-23 (2014). **(Invited).**

51. Andrew Fraine, Olga Minaeva, Abu Thomas, Alexander V. Sergienko, "Solid State Nonlinear Optics for Entangled Coherent States", Frontiers in Optics/Laser Science 2014 OSA , Tucson, Arizona, October 19-23 (2014).

52. Alexander Sergienko and David Simon "High-capacity quantum Fibonacci coding for key distribution, "QCrypt 2014, 4th international conference on quantum cryptography. Paris, France, September 1–5, (2014).

53. Olga Minaeva, Andrew Fraine, David Simon, Gregg Jaeger and Alexander Sergienko "Development of Entangled-Coherent-State Quantum Key Distribution with Single-Photon Nonlinear Cross-Phase Modulation" QCrypt 2014, 4th international conference on quantum cryptography. Paris, France, September 1–5, (2014).

54. David S. Simon and Alexander V. Sergienko "High Capacity Quantum Key Distribution With Hyper-Entangled Angular Momentum States" Gordon Research Conference: Quantum Science, Stonehill College in Easton MA, July 27 – August1 (2014).

55. Alexander V. Sergienko, Nestor Uribe-Patarroyo, Andrew Fraine, David Simon, Olga Minaeva "Effective Image Recognition Using High-Order Symmetry of Correlated Orbital Angular Momentum (OAM) States" International Conference "Advances in Foundations of Quantum Mechanics and Quantum Information with atoms and photons", Turin, Italy, May 25-30 (2014) **(Invited)**

56. Andrew Fraine, Olga Minaeva, David S. Simon, Gregg Jaeger, and Alexander V. Sergienko, "Nonlinear Optics in Graphene for Quantum Optics Applications", SPIE Photonics Europe, Brussels, Belgium, April 14-17 (2014).

57. V. Sergienko "Effective Image Recognition Using High-Order Symmetry of Correlated Orbital Angular Momentum (OAM) States, " International Conference Wigner-111, Budapest, Hungary, November 11-14 (2013). **(Plenary)**

58. O. Minaeva, A. Fraine, D.S. Simon, G.N. Goltsman, and A.V. Sergienko "High-resolution quantum measurement in modern telecommunication using broadband entanglement and fast single-photon detectors", 2nd International Conference on Quantum Technology, Russian Quantum Center, Moscow, Russia, July 20-24, (2013).

59. Luca Mazzarella, Francesco Ticozzi, Alexander V. Sergienko, Giuseppe Vallone, Paolo Villoresi, "Single-Photon Source with Asymmetric Multiplexed Architecture", Quantum Information Processing and Communication International Conference, Florence, Italy, June 30 – July 5 (2013).

60. V. Sergienko, N. Uribe-Patarroyo, A. Fraine, D. S. Simon, O. Minaeva "High-efficiency object identification using multi-dimensional correlated orbital angular momentum (OAM) states", 13th International Conference on Squeezed States and Uncertainty Relations - ICSSUR 2013, Nuremberg, Germany, June 23-28 (2013). **(Invited)**

61. Alexander V. Sergienko, David Simon, Nate Lawrence, Jacob Trevino, Luca Dal Negro, "High-capacity Fibonacci Key Coding in Quantum Communication", The Tenth Rochester Conferences on Coherence and Quantum Optics (CQO-X) and The Second Quantum Information and Measurement (QIM), Rochester, New York, June 17-20 (2013). **(Invited)**

62. Andrew Fraine, Nestor Uribe-Patarroyo, David Simon, Olga Minaeva, Alexander V. Sergienko, "Orbital Angular Momentum Joint Spectrum Analysis for Efficient Object Recognition",The Tenth Rochester Conferences on Coherence and Quantum Optics (CQO-X) and The Second Quantum Information and Measurement (QIM), Rochester, New York, June 17-20 (2013).

63. Mattia Minozzi, Stefano Bonora, Alex-ander V. Sergienko, Giuseppe Vallone, Paolo Villoresi, "Biphoton Generation with an Optimized Wavefront for Free-Space Propagation by means of Adaptive Optics", The Tenth Rochester Conferences on Coherence and Quantum Optics (CQO-X) and The Second Quantum Information and Measurement (QIM), Rochester, New York, June 17-20 (2013).

64. Luca Mazzarella, Francesco Ticozzi, Alexander V. Sergienko, Giuseppe Vallone, Paolo Villoresi, "Single-Photon Source with Asymmetric Multiplexed Architecture", The Tenth Rochester Conferences on Coherence and Quantum Optics (CQO-X) and The Second Quantum Information and Measurement (QIM), Rochester, New York, June 17-20 (2013).

65. V. Sergienko, N. Uribe-Patarroyo, A. Fraine, D. S. Simon, O. Minaeva "High-efficiency object identification using multi-dimensional correlated orbital angular momentum (OAM) states", ICONO/LAT: 2013, Moscow, Russia, June 18-22 (2013). **(Invited)**

66. O. Minaeva, A. Fraine, A. Sergienko, A. Korneev, A. Divochiy, G. Goltsman, "High resolution optical time-domain reflectometry using superconducting single-photon detectors, " ICONO/LAT: 2013, Moscow, Russia, June 18-22 (2013).

67. Mattia Minozzi, Stefano Bonora, Alexander V. Sergienko, Giuseppe Vallone, Paolo Villoresi, "Adaptive Optics Control of the Propagation of Biphoton Wavepacket", OSA Optics and Photonics Congress Imaging and Applied Optics, Arligton, Virginia, June 23-17 (2013).

68. Andrew Fraine, Nestor Uribe-Patarroyo, David Simon, Olga Minaeva, Alexander Sergienko, "Object Identification Using Correlated Orbital Angular Momentum States", CLEO 2013, San Jose, CA, June 9-14 (2013).

69. Alexander V. Sergienko, "How to Make and Use Entangled-Photon States", Extreme Photonics and Quantum Photonics Workshop, University of Ottawa, Ottawa, Canada, May 21-25 (2013). **(Invited)**

70. Alexander V. Sergienko, David S. Simon Nate Lawrence, Jacob Trevino, Luca Dal Negro, "Quantum key distribution with Fibonacci states", SPIE Photonics West - 2013, San Francisco, California, February 2-7 (2013). **(Invited)**

71. Martin P. J. Lavery, Andrew Fraine, David J. Roberston, Alexander V. Sergienko, Johannes Courtial, Alan Wilner, Miles J. Padgett, Univ. of Glasgow "The measurement and generation of orbital angular momentum using an optical geometric transformation", SPIE Photonics West - 2013, San Francisco, California, February 2-7 (2013).

72. V. Sergienko, O.V. Minaeva, A.M. Fraine, R. Egorov, D. S. Simon"High-Resolution Measurement of Polarization Mode Dispersion (PMD) in Discrete Telecom Components using Quantum Interferometr", Optical society of America FiO/LS 2012, Rochester, New York, October 14-18 (2012).

73. Olga V. Minaeva, Andrew Fraine, Alexander Sergienko, Alexander Korneev, Alexander Divochiy, Gregory Goltsman, "High Resolution Optical Time-Domain Reflectometry using Superconducting Single-Photon Detectors",Optical society of America FiO/LS 2012, Rochester, New York, October 14-18 (2012).

74. Alexander V. Sergienko, "Object Identification Using Colleralted Orbital Angular Momentum States", 5th Italian Quantum Information Sciecne Conference, University of Padova, Italy, September 26-28 (2012). **(Keynote)**

75. O.V. Minaeva, A.M. Fraine, R. Egorov, D. S. Simon and and A. V. Sergienko, "High Resolution Measurement of Polarization Mode Dispersion (PMD) in Telecom Switch using Quantum Interferometry", Qunatum Communication, Measurement, and Computing (QCMC) 2012, Vienna, Austria, July 30 – August 3, (2012).

76. V. Sergienko, Andrew Fraine. Olga Minaeva, David Simon, and Roman Egorov, "Quntum Technology Meets Industry: High Resolution Measurement of Polarization Mode Dispersion in Discrete Telecom Devices using Quantum Interferometry",6th International Workshop "Advances in Foundations of Quantum Mechanics and Quantum Information with atoms and photons", INRIM, Turin, Italy, May 20-25 (2012). **(Invited)**

77. V. Sergienko, Andrew Fraine. Olga Minaeva, David Simon, and Roman Egorov, "High Resolution Measurement of Polarization Mode Dispersion in Discrete Telecom Devices using Quantum Interferometry", Quantum Information and Measurement (QIM 2012), OSA Research in Optical Sciences Congress, Berlin, Germany, March 19-21 (2012).

78. Alexander Sergienko, David S. Simon, Olga V. Minaeva, "Dispersion Cancellation and Precise Measurement with Quantum Interferometry", FiO/LS - OSA Annual Meeting, San Jose, CA, October 16-20 (2011). **(Invited)**

79. Alexander Sergienko, "Quntum Technology Meets Industry" Quantum Science Symposium, Quantum biology and Quantum Information, Computing & Communication, Cambridge, MA, September 26-27 (2011). **(Invited)**

80. M. Fraine, R. Egorov, O. V. Minaeva, D. S. Simon, and A.V. Sergienko, "High Resolution Measurement of Polarization Mode Dispersion with Quantum Interferometry", IEEE Summer Topicals, Montreal, Quebec, Canada, July 18-20 (2011). **(Invited)**

81. D. S. Simon and A. V. Sergienko, "Correlated Imaging with Aberration Cancellation", International Conference On Quantum Information (ICQI), Univ. Of Ottawa, Ottawa, Canada, June 6-8 (2011).

82. Andrew M. Fraine, Roman Egorov, Olga V. Minaeva, David S. Simon, and Alexander V. Sergienko, "High Resolution Measurement of Polarization Mode Dispersion with Quantum Interferometry", International Conference On Quantum Information (ICQI), Univ. Of Ottawa, Ottawa, Canada, June 6-8 (2011).

83. Alexander V. Sergienko and David S. Simon "Correlated Imaging with Aberration Cancellation", International Conference "Quantum Science and Technology", Rovereto, Italy, May 9-12 (2011).

84. David S. Simon and Alexander V. Sergienko "Twin-Photon Correlated Confocal Microscopy", CLEO/QELS 2011, Baltimore, MD, May 1-6, (2011).

85. David S. Simon and Alexander V. Sergienko "Correlated Imaging with Aberration Can- cellation", CLEO/QELS 2011, Baltimore, MD, May 1-6, (2011).

86. Alexander V. Sergienko, David Simon, Olga Minaeva, "Ghost imaging with aberration cancellation", SPIE Optics + Photonics, Sand Diego, California, August 1-5 (2010). (Invited)

87. Alexander V. Sergienko, Nishant Mohan, Olga Minaeva, Gregory N. Goltsman, Magued B. Nasr, Bahaa Saleh, Malvin C. Teich, "Superconducting photon-counting detectors in optical measurement and biophotonics applications", SPIE Optics + Photonics, San Diego, California, August 1-5 (2010). **(Invited)**

88. V. Sergienko ''Ghost' imaging with aberration cancellation'', 5th Workshop "Advances in Foundations of Quantum Mechanics and Quantum Information with atoms and photons, INRIM, Turin, Italy, May 23-29 (2010). **(Invited)**

89. V. Sergienko, D. S. Simon, O. Minaeva, B. E. A. Saleh, and C. Bonato, ''Dispersion Cancellation in Quantum Interferometry and Quantum Imaging'', Workshop on Single and Entangled Photons: Sources, Detectors, Components, and Applications, NIST Boulder, Colorado November 3-6, (2009).

90. N. Mohan, A. V. Sergienko, O. Minaeva, G. N. Gol'tsman, M. B. Nasr, B. E. A. Saleh, and M. C. Teich, ''Photon-counting optical coherence tomography using superconducting single-photon detectors'', Workshop on Single and Entangled Photons: Sources, Detectors, Components, and Applications, NIST Boulder, Colorado November 3-6, (2009).

91. V. Sergienko, O. Minaeva, D. Simon, B. E. A. Saleh, and C. Bonato, "Quantum Dispersion Cancellation in Frequency and in Space" CLEO/Europe-IQEC, 19th

International Congress on Photonics in Europe, Munich, Germany, June 14-19, (2009).

92. O. Minaeva, A. Divochiy, A. Korneev, A. V. Sergienko and G. N. Gol'tsman, "Number Resolving Superconducting Single-Photon High Speed Infrared Photon Counting with Photon Detectors (SSPDs)" CLEO/Europe-IQEC, 19th International Congress on Photonics in Europe, Munich, Germany, June 14-19, (2009).

93. Alexander Sergienko, Olga Minaeva, Cristian Bonato, Bahaa E. A. Saleh, Paolo Villoresi "Dispersion Cancellation and Manipulation in Quantum Interferometry" Frontiers in Optics 2008 OSA Annual Meeting, Rochester, NY, October 19-24 (2008). **(Invited)**

94. Olga Minaeva, Cristian Bonato, Bahaa E. A. Saleh, Alexander V.. Sergienko, "Odd- and Even-Order Dispersion Cancellation in Quantum Interferometry", Frontiers in Optics 2008 OSA Annual Meeting, Rochester, NY, October 19-24 (2008).

95. Alexander Sergienko, "Entanglement in Quantum Communication: Dispersion Cancellation and Decoherence-Free Subspaces", SECOQC Quantum Network Demonstartion Conference, Vienna, Austria, October 8-10 (2008).

96. Cristian Bonato, Olga Minaeva, Alexander V. Sergienko, Bahaa E. A. Saleh, Stefano Bonora, and Paolo Villoresi "Spatial and Spectral Phase Control in Quantum Interferometry", QCCQI 2008 Quantum/Classical Control in Quantum Information, Otranto, Italy, September 13-20 (2008).

97. T. B. Bahder, D. S. Simon, and A. V. Sergienko, "Effect of Dispersion on Fidelity of Quantum Interferometer", 3rd International conference of Quantum Information, ICQI 2008, Boston, Massachusetts, July 13-15 (2008).

98. V. Sergienko C. Bonato, B. E. A. Saleh, S. Bonora, P. Villoresi, "Aberration Cancellation in Quantum Interferometry", 3rd International conference of Quantum Information, ICQI 2008, Boston, Massachusetts, July 13-15 (2008). **(Invited)**

99. Bonato, A. V. Sergienko, B. E. A. Saleh, S. Bonora, P. Villoresi, "Even-order Aberration Cancellation in Quantum Interferometry", 4th Internatinal Workshop "Advances in foundations of Quantum Mechanics and Quantum Information with Atoms and Photons", Turin, Italy, May 19-23 (2008).

100. V. Sergienko, C. Bonato, S. Bonora, P. Villoresi, "Engineering Multiparameter Entangled States With Adaptive Optics", 4th Internatinal Workshop "Advances in foundations of Quantum Mechanics and Quantum Information with Atoms and Photons", Turin, Italy, May 19-23 (2008). **(Invited).**

101. O. Minaeva, A. V. Sergienko, G. Goltsman, "High-Speed Infrared Photon Counting witht Superconducting Single-Photon Detectors (SSPD) for Quantum Communication", SPIE Symposium on Defense & Security, Orlando, Florida, March 16 -20 (2008).

102. Nishant Mohan, Olga Minaeva, Magued Nasr, Bahaa E. A. Saleh, Alexander V. Sergienko, and Malvin C. Teich, "Optical Coherence Domain Imaging Using Superconducting Single-Photon Detectors", SPIE Photonics West 2008, San Jose, California, January 19 – 24 (2008).

103. V. Sergienko, ''Precise Optical Measurement in the Infrared with Superconducting Single-Photon Detectors (SSPD)'', SPW 2007, Single-Photon Workshop, INRIM Istituto Nazionale di Recerca Metrologica, Turin, Italy, September 25 – 28, (2007). **(Invited).**

104. Olga Minaeva, Nishant Mohan, Martin A. Jaspan, Alexander V. Sergienko,Malvin C. Teich, Bahaa E. A.Saleh, Boston Univ.; Grigoriy N. Goltsman "Biophotonics Application of Superconducting Single-Photon Detectors," SPW 2007, Single-Photon Workshop, INRIM Istituto Nazionale di Recerca Metrologica, Turin, Italy, September 25 – 28, (2007).

105. Olga Minaeva, Nishant Mohan, Martin A. Jaspan, Alexander V. Sergienko,Malvin C. Teich, Bahaa E. A.Saleh, Boston Univ.; Grigoriy N. Goltsman ''Superconducting single-photon detectors for biophotonics applications'', SPIE Optics East 2007, Boston, MA, September 9-12, (2007).

106. Alexander V. Sergienko, Martin A. Jaspan, Bahaa E. A.Saleh, Malvin C. Teich ''New sources of optical entanglement for quantum cryptography at 1.5 microns'', SPIE Optics East 2007, Boston, MA, September 9-12, (2007). **(Invited).**

107. Sergienko, C. Bonato, and P. Villoresi ''Spectral Entanglement and Precise Measurement of Optical Dispersion'', CLEO/Europe-IQEC, 18th International Congress on Photonics in Europe, Munich, Germany, June 17-22, (2007).

108. Sergienko, C. Bonato,. B. E. A. Saleh, and M. C. Teich ''Two-Photon Spectral Coherencey Matrix and Multi-Prarameter Optical Entanglement'', CLEO/Europe-IQEC, 18th International Congress on Photonics in Europe, Munich, Germany, June 17-22, (2007).

109. Alexander Sergienko, Martin Jaspan , Olga Minaeva, Bahaa E. A. Saleh, and Malvin C. Teich ''Engineering Robast Optical entanglement for Quantum Communicartion'', International Conference on Quantum Information ICQI, University of Rochester, Rochester, New York, June 13-15, (2007). **(Invited).**

110. Magued Nasr, Alexander Sergienko, Bahaa Saleh, Silvia Carrasco, Malvin Teich, David Humm Martin Fejer ''Generation of Ultra-Broadband Spontaneous Parametric Down conversion from Chirped Periodically Poled Near-Stoichiometric Lithium Tantalate'' International Conference on Quantum Information ICQI, University of Rochester, Rochester, New York, June 13-15, (2007).

111. Bonato, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Two-Photon Spectral Coherency Matrix and Multi-Parameter Optical Entanglement", CLEO/IQEC 2007, Baltimore, USA, May 6-11, (2007).

112. V. Sergienko, M. Jaspan, B. E. A. Saleh, and M. C. Teich, ''Quantum Cryptography with Optical Entanglement at 1.5 μm'', Frontiers in Optics 2006, OSA Annual Meeting, October 8-12 (2006).

113. V. Sergienko, M. Jaspan, B. E. A. Saleh, and M. C. Teich, "Optical Entanglement for Quantum Telecommunication", SPIE Photonics East, Boston, Massachusetts, October 1-5 (2006).

114. V. Sergienko, M. Jaspan, B. E. A. Saleh, and M. C. Teich, "Engineering Optical Entanglement for Quantum Telecommunication", SPIE Annual Meeting ''Optics & Photonics, San Diego, CA, August 13-17 (2006). **(Invited).**

115. V. Sergienko, M. Jaspan, B. E. A. Saleh, and M. C. Teich, "Constructing Optical Entanglement for Quantum communication", 26 International Colloquium on Group Theoretical Methods in Physics", City University of New York, New York, NY June 26-30 (2006). **(Invited).**

116. V. Sergienko "Precise Quantum Measurement with Entangled Photons", International Workshop on "Quantum Nanophotonics", University of Palermo, Sicily, Italy, May 23-24 (2006). **(Invited).**

117. V. Sergienko, M. Jaspan, B. E. A. Saleh, and M. C. Teich, "Engineering Optical Entanglement for Quantum communication", International Workshop on Linear Optical Quantum Information Processing (LoQuIP), University of Louisiana, Baton Rouge, April 9-12 (2006). **(Invited).**

118. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Characterization of Single-Photon Detectors With Correlated-Photon Pairs: From Photomultiplier Tubes To Superconducting Photon Counters and Precise Optical Measurement with Entangled Photons (Quantum Metrology), Single Photon Detection Workshop 2005, Sources, Detectors, Applications, and Measurement Methods, National Physics Laboratory, Teddington UK, October 24-26 (2005). (Plenary)

119. Julia Pavlovich, W. C. Karl, B. E. A. Saleh, A. V. Sergienko, M. C. Teich "Parameter Estimation in Quantum Optical Coherence Tomography," Frontiers in Optics, OSA Annual Meeting, Tucson, AZ, October 16-19(2005).

120. S. Carrasco, A. V. Sergienko, M. B. Nasr, B. E. A. Saleh, M. C. Teich, J. P. Torres, and L. Torner, "Spectral Management of Entangled Two-Photon States for Submicron Resolution Optical Coherence Tomography", Optical Science and Technology, 50th SPIE Annual Meeting, San Diego, California, July 30 - August 4 (2005). **(Invited).**

121. V. Sergienko, "Challenges in Quantum-Optical Entanglement Generation and Detection", International Conference "Novel Problems in Quantum Sciences", University of Camerino, July 6-8, (2005). **(Invited).**

122. S. Carrasco, M. B. Nasr, A. V. Sergienko, B. E. A. Saleh, M. Teich, J. P. Torres and L. Torner, "Submicron Resolution Optical Coherence Tomography Using

Noncollinear Parametric down-conversion EOS Topical Meeting, Advanced Imaging Techniques, Glasgow, UK, June 21-23 (2005).

123. S. Carrasco, M. B. Nasr, A. V. Sergienko, B. E. A. Saleh, M. Teich, J. P. Torres and L. Torner "Submicron Resolution Optical Coherence Tomography Using Noncollinear Parametric Down-Conversion", CLEO/IQEC 2005, Baltimore, USA, May 15-19, (2005).

124. S. Carrasco, A. V. Sergienko, M. B. Nasr, B. E. A. Saleh, M. C. Teich, J. P. Torres, and L. Torner, "Spectral Management of Entangled Two-Photon States for Submicron Resolution Optical Coherence Tomography", International Conference on Squeezed States and Uncertainty Relations, ICSSUR-9, Besancon, France, May 2-6 (2005). **(Invited)**

125. Alexander Sergienko, "Engineering Entanglement for Quantum Information Processing and Quantum Measurement", International Workshop "Quantum Entanglement in Physical and Information Sciences", Pisa, Italy, December 14-18 (2004). **(Invited)**

126. Alexander Sergienko, "Engineering Entanglement for Quantum Cryptography and Quantum Optical Measurement", International Workshop "Quantum Technologies for 21st Century", Genoa, Italy, November 4 (2004). **(Invited)**

127. Alexander V. Sergienko, Ayman F. Abouraddy, Patrick R. Stone, Bahaa E. A. Saleh, and Malvin C. Teich "Entangled-Photon Imaging of a Pure Phase Object", Frontiers in Optics, OSA Annual Meeting, Rochester, NY, October 10-14 (2004). **(Invited)**

128. E. A. Saleh, M. B. Nasr, A. V. Sergienko, and M. C. Teich, "Dispersion Effectsin Quantum Optical Coherence Tomography", Frontiers in Optics, OSA Annual Meeting, Rochester, NY, October 10-14 (2004). **(Invited)**

129. V. Sergienko, H. Guillet de Chatellus, G. Di Giuseppe, B. E. A. Saleh, and M. C. Teich "Engineering Entangled-Photon States for Quantum Information and Optical Measurement", Frontiers in Optics, OSA Annual Meeting, Rochester, NY, October 10-14 (2004). **(Invited)**

130. S. Carrasco, J. P. Torres, L. Torner, A.V. Sergienko, B. E. A. Saleh, and M. C. Teich "Spectral Management of Entangled Two-Photon States", Frontiers in Optics, OSA Annual Meeting, Rochester, NY, October 10-14 (2004).

131. V. Sergienko, H. Guillet de Chatellus, G. Di Giuseppe, B. E. A. Saleh, and M. C. Teich "Engineering Entangled-Photon States for Quantum Information", NIST-ARDA Entangled-Photon Workshop, NIST, Gaithersburg, Maryland, September 7-8 (2004). **(Invited)**

132. A.V. Sergienko, S. Carrasco, J. P. Torres, L. Torner, B. E. A. Saleh, and M. C. Teich "Engineering Entanglement for Quantum Measurement in Bio-Photonics",

Quantum Information Processing and Computation Workshop, Rome, Italy, September 20-22 (2004).

133. S. Carrasco, J. P. Torres, L. Torner, A.V. Sergienko, B. E. A. Saleh, and M. C. Teich "Enhancing the Axial Resolution of Quantum Optical Coherence Tomography by Chirped Quasi Phase Matching", 1st International Workshop "Imaging at the Limits", Cargese, Corsica, France, September 6-11 (2004). **(Invited)**

134. H. Guillet de Chatellus, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Engineering Entangled-Photon States for Quantum Information Processing Using Two-Dimensional PPLN Crystals", Optical Science and Technology, 49th SPIE Annual Meeting, Denver, Colorado, August 2-6 (2004). **(Invited)**

135. Z. D. Walton, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Generating Frequency-Uncorrelated Polarization-Entangled Photon Pairs With Independently Controllable Marginal Spectra", Optical Science and Technology, 49th SPIE Annual Meeting, Denver, Colorado, August 2-6 (2004).

136. S. Carrasco, J. P. Torres, L. Torner, A. V. Sergienko. B. E. A. Saleh, and M. C. Teich, "Enhancing the Axial Resolution of Quantum Optical Coherence Tomography by Non-Periodic Quasi-Phase-Matching", The 7th International Conference on Quantum Communication, Measurement and Computing, Glasgow, UK, July 25-29 (2004).

137. Alexander Sergienko, "Quantum state engineering for quantum communications and quantum measurement", 6th Volterra-CIRM International School, Levico, Trento, Italy, July 3-9 (2004). **(Invited).**

138. Alexander Sergienko, ''Engineered Few-Qubit Entanglement: from Quantum Cryptography to Quantum Bio-Photonics'', Special European Commission Workshop IST-FET «Quantum Information and Communication'', Brussels, Belgium, June 3 (2004). **(Keynote).**

139. Zachary D. Walton, Alexander V. Sergienko, Ayman F. Abouraddy, Bahaa E. A. Saleh, and Malvin C. Teich "Decoherence-Free Subspaces in Quantum Communication", SPIE Second International Symposium "Fluctuations and Noise", Gran Canaria, Spain, May 25-28 (2004).

140. H. Guillet de Chatellus, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Engineering Entangled-Photon States Using Two-Dimensional PPLN Crystals", CLEO/IQEC 2004, San Francisco, CA, May 17-20 (2004).

141. Z. D. Walton, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Symmetric noise-Immune Quantum Key Distribution", CLEO/IQEC 2004, San Francisco, CA, May 17-20 (2004).

142. H. Guillet de Chatellus, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Engineering Entangled-Photon States Using Two-Dimensional PPLN Crystals", Photonics Europe, SPIE Conference, Strasbourg, France, April 26-30 (2004).

143. M. B. Nasr, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Demonstration of Dispersion-Cancelled Quantum-Optical Coherence Tomography", Photonics Europe, SPIE Conference, Strasbourg, France, April 26-30 (2004).

144. Alexander Sergienko "Engineered Entanglement: From Quantum Cryptography to Quantum Bio-Photonics" 2nd International Workshop ad memoriam of Carlo Novero, "Advances in Foundations of Quantum Mechanics and Quantum Information With Atoms and Photons", Istituto Elettrotecnico Nazionale (IEN) Galileo Ferraris, Turin, April 26-28 (2004). **(Invited).**

145. Alexander Sergienko "Engineering Entanglement for Quantum Information Processing and Quantum Measurement'', International Meeting "Foundations of Quantum Information'', University of Camerino, Camerino, Italy, April 16-19 (2004). **(Invited).**

146. Alexander Sergienko "Linear Optical Engineering of Quantum Entanglement for Quantum Information Processing'', European workshop QUIPROLO, University of Erlangen-Nurenberg, Erlangen, Germany, April 14-16 (2004). **(Invited).**

147. Z. D. Walton, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Decoherence-Free Subspaces in Quantum Communication'', SPIE Defense and Security Conference, Orlando, Florida, April 14-17 (2004)

148. V. Sergienko, G. Di Giuseppe, K. C. Toussaint, M. B. Nasr, B. E. A. Saleh, and M. C. Teich, "Quantum Bio-Photonics", Latsis Symposium "Quantum Optics for Communication and Computing", EPF Lausanne, Switzerland, March 1-3 (2004).

149. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Robust Integrrated Quantum Computing", DAPRA FoQuS teaming workshop, Falls Church, Virginia, January 27-29 (2004).

150. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Building High-Fidelity Entangled-Photon Link for Quantum Key Distribution", DAPRA QuIST, Fort Lauderdale, Florida, November 12-14 (2003).

151. Zachary D. Walton, Alexander V. Sergienko, Ayman F. Abouraddy, Bahaa E. A. Saleh, and Malvin C. Teich "Decoherence-Free Subspaces in Quantum Key Distribution", Optical Society of America Annual Meeting, Tucson, Arizona, October 5-9 (2003).

152. Alexander V. Sergienko, Ayman F. Abouraddy, Patrick R. Stone, Bahaa E. A. Saleh, and Malvin C. Teich "Quantum Imaging of Purely Phase Objects", Optical Society of America Annual Meeting, Tucson, Arizona, October 5-9 (2003).

153. Alexander V. Sergienko, Zachary D. Walton, Bahaa E. A. Saleh, and Malvin C. Teich, "Alignment-Free Polarization Coding Quantum key Distribution", The International Symposium on Optical Science and Technology, SPIE 48th Annual Meeting, Conference 5161, San Diego, CA, August 3 - 8 (2003). **(Invited).**

154. Czitrovszky, D. Oszetzky, A. Nagy, and A. Sergienko "Modeling of a special light source with pre-determined number of photons", The International Symposium on Optical Science and Technology, SPIE 48th Annual Meeting, Conference 5161, San Diego, CA, August 3 - 8 (2003).

155. Kimani C. Toussaint, Giovanni Di Giuseppe, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Experimental Demonstration of Entangled-Photon Ellipsometry", The International Symposium on Optical Science and Technology, SPIE 48th Annual Meeting, Conference 5161, San Diego, CA, August 3 - 8 (2003).

156. Zachary D. Walton, Ayman F. Abouraddy, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Decoherence-Free Subspaces in Quantum Key Distribution", 4th European QIPC Workshop, Oxford, UK July 13 – 17 (2003).

157. Alexander V. Sergienko, Kimani C. Toussaint, Giovanni Di Giuseppe, Bahaa E. A. Saleh, and Malvin C. Teich, "Experimental Demonstration of Quantum Ellipsometry", 3rd International Conference on Spectroscopic Ellipsometry, ICSE-3, Vienna, Austria, July 6-11 (2003).

158. Alexander V. Sergienko, "Precise Polarization Optical Measurement Using Entangled States", 3rd International Conference on Spectroscopic Ellipsometry, ICSE-3, Vienna, Austria, July 6-11 (2003).

159. Alexander V. Sergienko, Kimani C. Toussaint, Giovanni Di Giuseppe, Bahaa E. A. Saleh, and Malvin C. Teich, "Experimental Demonstration of Quantum Ellipsometry", Technical Digest, European Quantum Electronics Conference (EQEC), Munich, Germany June 22-27 (2003).

160. Zachary D. Walton, Ayman F. Abouraddy, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Passive Autocompensating Quantum Cryptography", Technical Digest, European Quantum Electronics Conference (EQEC), Munich, Germany June 22-27 (2003).

161. Zachary D. Walton, Mark C. Booth, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich "Controllable Frequency entanglement via Auto-phase-Matched Spontaneous parametric Down-Conversion", Technical Digest, Quantum Electronics and Laser Science Conference (QELS), Baltimore, MD, June 1-6 (2003).

162. Magued B. Nasr, Bahaa E. A. Saleh, Alexander V. Sergienko, and Malvin C. Teich, "Dispersion-Cancelled Tomographic Measurements Using Entangled Photons", Technical Digest, Quantum Electronics and Laser Science Conference(QELS), Baltimore, MD, June 1-6 (2003).

163. Ayman Abouraddy, Patrick Stone, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Entangled-Photon Imaging of a Phase Object", Technical Digest, Quantum Electronics and Laser Science Conference (QELS), Baltimore, MD, June 1-6 (2003).

164. Kimani C. Toussaint, Giovanni Di Giuseppe, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Experimental Demonstration of Quantum

Ellipsometry", Technical Digest, Quantum Electronics and Laser Science Conference (QELS), Baltimore, MD, June 1-6 (2003).

165. Mark C. Booth, Giovanni Di Giuseppe, Bahaa E. A. Saleh, Alexander V. Sergienko, and Malvin C. Teich "Quantum optical Coherence Tomography and Applications to Biological Imaging" Technical Digest, Conference on Lasers and Electro-Optics(QELS), Baltimore, MD, June 1-6 (2003).

166. V. Sergienko, G. Di Giuseppe, B. E. A. Saleh, and M. C. Teich "High-fidelity Entangled-Photon Link for Quantum Key Distribution Testbed", Quantum Information and Computation, Conference 5105, AeroSence SPIE Meeting, Orlando, FL, April 21-25 (2003). **(Invited).**

167. Z. D. Walton, A. F. Abouraddy, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "One-Way Entangled-Photon Autocompensating Quantum Cryptography", Quantum Information and Computation, Conference 5105, AeroSence SPIE Meeting, Orlando, FL, April 21-25 (2003).

168. F. A. Bovino, P. Varisco, A. Martinoli, P. De Nicolo, S Bruzzo, A. M. Colla, G. Castagnoli, G. Di, Giuseppe, and A. V. Sergienko "Demonstration of Secure Quantum Key Distribution", Quantum Information and Computation, Conference 5105, AeroSence SPIE Meeting, Orlando, FL, April 21-25 (2003).

169. G. S. Jaeger, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Investigating Quantum Information Capacity of Hyper-Entangled States", Quantum Information and Computation, Conference 5105, AeroSence SPIE Meeting, Orlando, FL, April 21-25 (2003).

170. V. Sergienko "Optical Entanglement and Single-Photon Detection", Workshop on Single-Photon: Detectors, Applications, and Measurement Methods, NIST, Gaithersburg, MD, March 31 – April 1 (2003). **(Invited).**

171. Z. D. Walton, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Passive Autocompensating Quantum Cryptography", 2nd MITRE Workshop on Quantum Cryptographic Applications, McLean, Virginia, February 11-12 (2003).

172. Sergienko "Quantum Metrology with Entangled Photons", 33rd Winter Colloquium on The Physics of Quantum Electronics Snowbird, Utah January 5-9, (2003). **(Plenary).**

173. Mark C. Booth, Mete Atature, Giovanni Di Giuseppe, Alexander V. Sergienko, Bahaa E. A. Saleh, and Malvin C. Teich, "Counterpropagating entangled photons in a periodically poled nonlinear waveguide," 15th Annual Lasers and Electro-Optics Society Meeting, Glasgow, Scotland, November 10-14 (2002).

174. Magued B. Nasr, Ayman F. Abouraddy, Bahaa E. A. Saleh, Alexander V. Sergienko, and Malvin C. Teich, "Dispersion Cancelled Tomographic Measurements Using Entangled Photons", Annual Meeting of the Optical Society of America, Orlando, Florida, September 29 - October 3 (2002).

175. G. S. Jaeger, M. Teodorescu-Frumosu, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Lorentz-Group Invariants of Multi-Photon polarization States and Quantum Entanglement", Annual Meeting of the Optical Society of America, Orlando, Florida, September 29 - October 3 (2002).

176. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Developing High-Fidelity Entangled-Photon Link for Quantum Key Distribution Testbed", DARPA Quantum Information Science and Technology (QuIST) PI Meeting, Cambridge, MA, September 9-13, (2002). **(Invited).**

177. V. Sergienko, A. F. Abouraddy, K. C. Toussaint, Jr., B. E. A. Saleh, and M. C. Teich "Entangled-Photon Ellipsometry", The 19th Congress of the International Commission for Optics (ICO), Florence, Italy, 25-30 August (2002).

178. E. A. Saleh, A. F. Abouraddy, A. V. Sergienko, and M. C. Teich "Quantum interferometry, entanglement, and holography", The 19th Congress of the International Commission for Optics (ICO), Florence, Italy, 25-30 August (2002).

179. V. Sergienko "Quantum Entanglement and Surface Characterization" QUEST 2002 summer workshop, Santa Fe, NM, August 4-9 (2002). **(Invited).**

180. V. Sergienko, G. Di Giuseppe, M. Atature, B. E. A. Saleh, and M. C. Teich "Entangled-Photon State Engineering," The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22-26 (2002). **(Invited).**

181. F. Bovino, P. Varisco, A. M. Colla, G. Castagnoli, G. Di Giuseppe, and A. V. Sergienko "Demonstration of Entangled-Photon Link for Quantum Cryptography," The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22- 26 (2002).

182. M. Atature, Y.-T. Liu, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Refractive-Index Measurements Using Quantum Interference of Entangled-Photon Pairs," The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22- 26 (2002).

183. J. Miller, S. W. Nam. J. M. Martinis, and A. V. Sergienko "Demonstration of Photon-Number Resolving Detectors for Quantum Information Applications," The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22- 26 (2002).

184. M. C. Booth, M. Atature, G. Di Giuseppe, A. V. Sergienko, B. E. A. Saleh, M. C. Teich "Counter-Propagating Entangled Photons in a Waveguide With Periodic Nonlinearity," The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22- 26 (2002).

185. E. A. Saleh, A. F. Abouraddy, A. V. Sergienko, and M. C. Teich, "Role of Entanglement in Quantum Holography", The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22-26 (2002). **(Invited).**

186. K. C. Toussaint, Jr., M. Corbo, A. F. Abouraddy, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, " Polarization-Entangled Photon Pairs Obviate Need for Calibration in Material Characterization ", The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22- 26 (2002).

187. G. Di Giuseppe, M. Atature, M. Shaw, Y.-T. Liu, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Ultrafast Generation of Two-Photon Entangled States Using Two nonlinear Crystals", The 6th International Conference on Quantum Communication, Measurement and Computing, MIT, Boston, MA, July 22- 26 (2002).

188. G. Jaeger, M. Teodorescu-Frumosu, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Entangled States and Quantum Stokes Tensors," Wigner Centennial Conference, Pech, Hungary, July 8-12 (2002).

189. K. C. Toussaint, Jr., A. F. Abouraddy, M. Corbo, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, " Polarization-Entangled Twin Photon Ellipsometry", The International Symposium on Optical Science and Technology, SPIE 47th Annual Meeting, Conference 4819, Seattle, WA, July 7-11 (2002).

190. J. Miller, S. Nam, J. M. Martinis, A. V. Sergienko, "Development of Complete Bell-State Analyzer Using Energy Dispersive Photon Counters," The International Symposium on Optical Science and Technology, SPIE 47th Annual Meeting, Conference 4819, Seattle, WA, July 7-11 (2002).

191. V. Sergienko, G. Di Giuseppe, G. S. Jaeger, M. Atatüre, M. D. Shaw, B. E.A. Saleh, and M. C. Teich, "Hyperentangled-Photon Cryptography", The International Symposium on Optical Science and Technology, SPIE 47th Annual Meeting, Conference 4821, Seattle, WA, July 7-11 (2002). **(Invited).**

192. M. C. Teich, M. Nasr, A. F. Abouraddy, A. V. Sergienko, and B. E. A. Saleh, Invited Lecture, "Quantum Tomography," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002). **(Invited).**

193. E. A. Saleh, A. F. Abouraddy, A. V. Sergienko, and M. C. Teich, Invited Lecture, "Quantum Holography," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002). **(Invited).**

194. F. Abouraddy, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Quantum Entanglement and the Two-Photon Stokes Parameters," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

195. G. Di Giuseppe, M. Atatüre, M. D. Shaw, Y.-T. Liu, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Ultrafast Generation of Two-Photon Entangled States Using Two Non-Linear Crystals," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

196. G. Jaeger, M. Teodorescu-Frumosu, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Minkowski Invariants from Multi-Photon Stokes Tensors," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

197. K. C. Toussaint, Jr., A. F. Abouraddy, M. Corbo, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Quantum Ellipsometry with Polarization-Entangled Photon Pairs," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

198. J. Miller, S. Nam, J. M. Martinis, G. Di Giuseppe, M. Atatüre, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Quantum Interference with Photon Number Resolving Detectors," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

199. M. C. Booth, M. Atatüre, G. Di Giuseppe, B. E. A. Saleh, A. V. Sergienko, and M. C. Teich, "Counter-Propagating Entangled Photons in a Waveguide with Periodic Nonlinearity," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

200. M. Atatüre, Y.-T. Liu, G. Di Giuseppe, B. E. A. Saleh, A. V. Sergienko, and M. C. Teich, "Refractive-Index Measurements Using Quantum Interference of Entangled-Photon Pairs," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002).

201. V. Sergienko, G. Di Giuseppe, G. S. Jaeger, M. Atatüre, M. D. Shaw, B. E.A. Saleh, and M. C. Teich, "Hyperentangled-Photon Cryptography," International Quantum Electronics Conference/Lasers, Applications, & Technologies: Quantum Optics, Moscow, Russia, June 22-28, (2002). **(Invited).**

202. V. Sergienko, "Quantum Information Processing and Precise Optical Measurements with Hyper-Entangled States", NATO Advanced Study Institute on Quantum Information and Information Technologies, Ankara-Antalya, Turkey, June 3-14 (2002). **(Invited).**

203. G. Jaeger, M. Teodorescu-Frumosu, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Lorentz Group Invariants of Multi-Photon Polarization States and Entanglement", International Conference "Fundamentals of Probability and Physics – 2", Växjö, Sweeden, June 2-7 (2002).

204. V. Sergienko, G. Di Giuseppe, G. S. Jaeger, M. Atatüre, M. D. Shaw, B. E. A. Saleh, and M. C. Teich, "Hyperentangled-Photon Cryptography," Technical Digest, Quantum Electronics and Laser Science Conference, Long Beach, California, May 19-24 (2002).

205. K. C. Toussaint, Jr., A. F. Abouraddy, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, "Quantum Ellipsometry," Technical Digest Quantum Electronics and Laser Science Conference, Long Beach, California, May 19-24 (2002).

206. Aaron J. Miller, Sae Woo Nam, John M. Martinis, Alexander V. Sergienko "Energy-resolving photon counters for use in a full Bell-state analyzer", American Physical Society Annual Meeting, Indianapolis, Indiana, March 18-22 (2002).

207. V. Sergienko, G. Di Giuseppe, M. Atature, G. S. Jaeger, B. E. A. Saleh, and M. C. Teich "Hyper-Entanglement and Quantum Cryptography", 32nd Winter Colloquium on The Physics of Quantum Electronics Snowbird, Utah January 6-10, (2002). **(Invited).**

208. V. Sergienko, G. S. Jaeger, B. E. A. Saleh, and M. C. Teich, "Hyper-Entangled States and Secure Communication," DARPA Quantum Information Science and Technology (QuIST) Kickoff Meeting, Dallas, TX, November 25-27 (2001).

209. Abouraddy, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Quantum Entanglement and the Two-Photon Stoks Parameters", Annual Meeting of the Optical Society of America, Long Beach, CA, October 14-18 (2001).

210. G. Di Giuseppe, A. V. Sergienko, M. Atature, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Entanglement in Cascaded-Crystal Parametric Down-Conversion", Annual Meeting of the Optical Society of America, Long Beach, CA, October 14-18 (2001).

211. Abouraddy, B. E. A. Saleh, A. V. Sergienko, and M. C. Teich "Role of Entanglement in Two-Photon Imaging", Annual Meeting of the Optical Society of America, Long Beach, CA, October 14-18 (2001).

212. M. Atatüre, G. Di Giuseppe, M. D. Shaw, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "The Role of Hyperentanglement in Quantum Interferometry", Annual Meeting of the Optical Society of America, Long Beach, CA, October 14-18 (2001).

213. G. Di Giuseppe, A. V. Sergienko, M. Atature, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Entanglement in Cascaded-Crystal Parametric Down Conversion", International Workshop "Mysteries, Puzzles, and Paradoxes in Quantum Mechanics", Gargnano, Garda Lake, Italy, August 26 – September 1 (2001).

214. V. Sergienko, M. Atature, G. Di Giuseppe, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Hyperentanglement and Quantum Interference in Parametric Down Conversion", International Workshop "Mysteries, Puzzles, and Paradoxes in Quantum Mechanics", Gargnano, Garda Lake, Italy, August 26 – September 1 (2001). **(Invited).**

215. V. Sergienko, M. Atature, G. Di Giuseppe, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Hyperentanglement in Parametric Down-Conversion", 259.WE-Heraeus-Seminar, Exploring Quantum Physics, Venice, Italy, August 19 – 23 (2001).

216. G. Di Giuseppe, A. V. Sergienko, M. Atature, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Entanglement in Cascaded-Crystal Parametric Down-Conversion", 259.WE-Heraeus-Seminar, Exploring Quantum Physics, Venice, Italy, August 19 – 22 (2001).

217. M. Atatüre, G. Di Giuseppe, M. D. Shaw, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich, „The Role of Hyperentanglement in Quantum Interferometry," Invited Presentation, 2001 Gordon Research Conference on Nonlinear Optics and Lasers, New London, New Hampshire (July 2001).

218. V. Sergienko, M. Atature, G. Di Giuseppe, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Hyperentanglement in Parametric Down-Conversion", Technical Digest, XVII International Conference on Coherent and nonlinear Optics ICONO 2001, Minsk, Belorussia, June 26- July 1 (2001). **(Invited).**

219. M. Atature, G. Di Giuseppe, M. D. Shaw, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "The Role of Hyperentanglement and Quantum Interferometry", Technical Digest, 8th Rochester Conference on Coherence and Quantum Optics CQO8, Rochester, NY, June 13-16, (2001).

220. Abouraddy, B. E. A. Saleh, A.V. Sergienko, and M. C. Teich "Demonstration of the Complementarity of One- and Two-Photon Interference", Technical Digest, 8th Rochester Conference on Coherence and Quantum Optics CQO8, Rochester, NY, June 13-16, (2001).

221. V. Sergienko, M. Atature, G. Di Giuseppe, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Hyperntanglement in Parametric Down-Conversion", Technical Digest, 8th Rochester Conference on Coherence and Quantum Optics CQO8, Rochester, NY, June 13-16, (2001). **(Invited).**

222. Abouraddy, B. E. A. Saleh, A.V. Sergienko, and M. C. Teich "Role of Entanglement in Two-Photon Imaging", 7th International Conference on Squeezed States and Uncertainty Relations ICSSUR 2001, Boston, MA, June 4-8, (2001).

223. Z. Walton, A. Sergienko, M. Atature, B. E. A. Saleh, and M. C. Teich "Performance of Photon-Pair Quantum Key Distribution Systems", 7th International Conference on Squeezed States and Uncertainty Relations ICSSUR 2001, Boston, MA, June 4-8, (2001).

224. M. Atature, G. Di Giuseppe, M. D. Shaw, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "Simultaneous Multi-Parameter Entanglement and Quantum Interferometry", 7th International Conference on Squeezed States and Uncertainty Relations ICSSUR 2001, Boston, MA, June 4-8, (2001).

225. M. C. Teich, A. V. Sergienko, and B. E. A. Saleh, „Overview of Research at Boston University,s Quantum Imaging Laboratory, QUANTIM Conference, Laboratoire Kastler-Brossel, Université de Paris Pierre et Marie Curie, Paris, France (May 2001).

226. M. Atature, M. L. Daniell, A. V. Sergienko, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Hyperntanglement and Femtosecond Parametric Down-Conversion", Technical Digest Quantum Electronics and Laser Science Conference, Baltimore, Maryland, May 6-11, (2001).

227. V. Sergienko, M. Atature, G. Di Giuseppe, M. D. Shaw, B. E. A. Saleh, and M. C. Teich "Hyperntanglement in Parametric Down-Conversion", International Conference: "Quantum Interference and Cryptographic Keys: Novel Physics and Advancing Technologies", Cargese, Corsica, France, April 7-13, (2001). **(Invited).**

228. M. Atature, G. Di Giuseppe, M. D. Shaw, A. V. Sergienko, B. E. A. Saleh, and M. C. Teich "The Role of Hyperentanglement in Quantum Interferometry", International Conference: "Quantum Interference and Cryptographic Keys: Novel Physics and Advancing Technologies", Cargese, Corsica, France, April 7-13, (2001).

229. Ayman F. Abouraddy, Kimani Touissant, Alexander V. Sergienko, Bahaa E. A. Saleh, Malvin C. Teich "New Technique for Material Characterization Using Polarized-Entangled Photons", SPIE International Conference "OPTO Northeast and Imaging 2001", Rochester, NY, April 10-11 (2001).

230. Ayman F. Abouraddy, Bahaa E. A. Saleh, Alexander V. Sergienko, Malvin C. Teich "Partial Coherence and Partial Entanglement", SPIE International Conference "OPTO Northeast and Imaging 2001", Rochester, NY, April 10-11 (2001).

231. V. Sergienko, M. Atature, B. E. A. Saleh, and M. C. Teich “Engineering Space-Time Entanglement, 31st Annual Conference Physics of Quantum Electronics, Snowbird, Utah, January 7-11 (2001). **(Invited).**

232. Branning, A. Migdall, and A. V. Sergienko “Subfemtosecond Measurement of Group and Phase Delay Betweeen Two Photons”, Annual Meeting of the Optical Society of America, Providence, RI, October 22-26 (2000).

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237. T. Tsegaye, J. Soderholm, M. Atature, A. Trifonov, G. Byork, A. V. Sergienko, B. E. A. Sasleh, and M. C. Teich “Quantum Resolution of Geometric Rotations of Polarization”, Technical Digest, International Quantum Electronics Conference IQEC-2000, Nice, France, September 10-15 (2000), p. 135.

238. A.V. Sergienko “Quantum Optics With Polarized Entangled Photons”, Interdisciplinary International Conference Polarisation Effects in Lasers, Spectroscopy and Optoelectronics PELS-2000, Southampton, UK, September 6-9, (2000). **(Invited).**

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247. V. Sergienko, M. Atature, B. E. A. Saleh, and M. C. Teich ``Dispersion-Independent High-Visibility Quantum Interference in Ultrafast Parametric Downconversion,'' Annual Meeting of the Optical Society of America, Santa Clara, CA, September 26-30 (1999).

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250. Czitrovszky, A. Sergienko, P. Jani, and A. Nagy ``Absolute Measurement of Quantum Efficiency of Photon-Counting Photomultiplier Using Quantum Two-Photon Field and a Ratio Between Single- and Double-Electron Peaks'', International Commission for Optics 18th tri-annual meeting (ICO XVIII), San Francisco, CA, August 2-6, (1999).

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259. Dauler, A. V. Sergienko, M. Atature, B. E. A. Saleh, and M. C. Teich ``Measurement of Polarization Group Velocity Dispersion in Optically Active and Organic Materials Using Entangled Photons'' Conference on Lasers and Electro-Optics, Baltimore, MD, May 23-28, (1999).

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332. T. E. Kiess, Y. H. Shih, A. V. Sergienko, M. H. Rubin, and C. O. Alley "Einstein-Podolsky-Rosen-Bohm Experiment and Bell Inequality Violations Using Type-II Parametric Down Conversion", Joint Meeting of the American Physical Society and American Society of Physics Teachers, Crystal City, Virginia, 18-22 April (1994). Bulletin of the American Physical Society, v.32, No.2, p.1059 (1994).

333. O. Alley, Y. H. Shih, T. E. Kiess, A. V. Sergienko, and H. Yilmaz "Experiments with Entangled Two-Photon States From Type-II Parametric Down Conversion: Evidence for Wave-Particle Duality", Greece, January (1994).

334. V. Sergienko, Y. H. Shih, M. H. Rubin, T. E. Kiess, and C. O. Alley "Quantum Correlation of Polarization of Two-Photon Entangled State in Type-II Spontaneous Parametric Downconversion", Technical Digest of the Optical Society of America Annual Meeting, October 3-8, Toronto, Canada, Vol. 16, 160 (1993).

335. O. Alley, Y. H. Shih, A. V. Sergienko, M. H. Rubin, and T. E. Kiess "The Photon: Experimental Emphasis on Its Wave-Particle Duality", Proceedings of the Third International Workshop on Squeezed State and Uncertainty Relations, UMBC, Maryland, Aug. 10-13, p.545 (1993).

336. V. Sergienko, Y. H. Shih, T. E. Kiess, and C. O. Alley "EPR Experiment and Bell's Inequality Violation Using Type-II Parametric Down Conversion", Proceedings of the Third International Workshop on Squeezed State and Uncertainty Relations, UMBC, Maryland, Aug. 10-13, p. 609 (1993).

337. V. Sergienko, Y. H. Shih and M. H. Rubin "Two-Photon Interference in a Standard Mach-Zehnder Interferometer", Technical Digest of Conference on Quantum Electronics and Laser Science, May 2-7, Baltimore, Maryland Vol.12, 273 (1993).

338. V. Sergienko, Y. H. Shih, and M. H. Rubin "Interference of an Entangled Two-Photon State by Use of Two Michelson Interferometers and a 50-picosecond Coincidence Time Window", Technical Digest of Conference on Quantum Electronics and Laser Science,May 10-15, Anaheim, California, Vol.13, 102 (1992).

339. O. Alley, Y. H. Shih, A. V. Sergienko, and T. E. Kiess "Plans to Improve the Experimental Limit in the Comparison of the East-West and West-East One-Way Light Propagation Times on the Rotating Earth", Proceedings of the 24th PTTI Workshop, Washington DC, (1992).

340. Y. H. Shih, A. V. Sergienko, and M. H. Rubin "Study of Einstein-Podolsky-Rosen State for Space-Time Variables in a Two Photon Interference Experiment", Proceedings of International Workshop on Squeezed States and Uncertainty Relations, Moscow, Russia, May 25-29, 163 (1992).

341. V. Sergienko, G. Kh. Kitaeva, and A. N. Penin "Nondestructive Measurement of Intensity of Optical Fields Using Spontaneous Parametric Down Conversion",

Technical Digest of Conference on Quantum Electronics and Laser Science, May 10-15, Baltimore, Maryland, Vol.11, 110 (1991).

342. V. Sergienko, A. N. Penin, and T. A. Reutova "Localization of One-Photon State in Space and EPR paradox in Spontaneous Parametric Downconversion", Technical Digest of Conference on Quantum Electronics and Laser Science, May 10-15, Baltimore, Maryland, Vol.11, 112 (1991).

343. V. Sergienko, C. O. Alley, A. N. Penin, and Y. H. Shih "Absolute Measurement of Quantum Efficiency of Photodetectors Using Nonclassical optical Fields", Technical Digest of Conference on Lasers and Electro-Optics, May 10-15, Baltimore, Maryland, Vol.10, 452 (1991).

344. Y. H. Shih, A. V. Sergienko, and M. H. Rubin "Experiment on Interference of Two-Photon State Using Two Michelson Interferometers", Proceedings of International Workshop on Squeezed States and Uncertainty Relations, Maryland, March 28-30, 47 (1991).

345. V. Sergienko, T. A. Reutova, and A. N. Penin "Localization of One-Photon State in Space and E.P.R. Paradox in Spontaneous Parametric Down Conversion Process", Proceedings of International Workshop on Squeezed States and Uncertainty Relations, Maryland, March 28-30, 95 (1991).

346. V. Sergienko, G. Kh. Kitaeva, and A. N. Penin "Nondestructive Measurement of Intensity of Optical Fields Using Spontaneous Parametric Down Conversion", Proceedings of International Workshop on Squeezed States and Uncertainty Relations, Maryland, March 28-30, 233 (1991).

347. V. Shepelev, G. Kh. Kitaeva, A. N. Penin and A. V. Sergienko "Application of Fields With Nonclassical Statistics for Ultrafast Optical Processes Measurement", Ultrafast Phenomena in Spectroscopy (UPS-89), Brandenburg, Germany (1989).

348. V. Sergienko and A. N. Penin "Absolute Calibration of Photodetectors by Means of Two-Photon Fields", Proceedings of II International Conference Lasers and Their Applications, Tallinn, USSR, November 15-19 (1987).

349. Malygin, A. N. Penin and A. V. Sergienko "Spatio-Temporal Correlation of Optical Field in Spontaneous Parametric Scattering of Light", Proceedings of XII International Conference Coherent and Nonlinear Optics, Moscow, USSR, August 23-27 (1985).

Invited Lectures and Seminars:

1. A. Sergienko “novel high-resolution sensors and quantum network routers based on directionally unbiased linear optics”, ECE Colloquium, University of California San Diego, La Jolla, California, March 8, (2024).

2. A. Sergienko “Directionally-unbiased linear optics enables novel high-resolution sensors and quantum network routers”, ECE Colloquium, Tufts University, Boston, February 23, (2024).

3. A. Sergienko “School on Quantum Technologies: Quantum Communication and Quantum Sensors”, 5 lectures including one for the general public. Research Institute for Fundamental Sciences, Gebze, Turkey, July 25-26 (2023).

4. ''Higher-Dimensional Hong-Ou-Mandel Effect and Reconfigurable Entangled-State Networking with Linear-Optical Multiports'' Research Institute for Fundamental Sciences, Gebze, Turkey, July 1 (2022).

5. ''How to engineer and use entangled-photon states '' Research Institute for Fundamental Sciences, Gebze, Turkey, June 27 (2022).

6. ''New Linear-Optical Approach to Quantum Information Processing and Quantum Simulation'', Department of Physics, University of Rod Iseland, Kingston, RI February 25 (2022).

7. ''Quantum and Correlated Imaging”, Brookhaven National Laboratory, April 22 (2021).

8. ''New Linear-Optical Approach to Quantum Information Processing and Quantum Simulation'', Special Colloquium, Scientific and Technological Research Council of Turkey, October 8 (2020).
9. "Quantum Communication, Computing, and Networking”, National Academy of Sciences, National Materials and Manufacturing Board, Defense Materials Manufacturing and its Infrastructure (DMMI) Workshop, March 19-20 (2019).
10. ''Quantum Simulation of Complex Physical Hamiltonians Using Directionally Unbiased Linear-Optical Multiports,'' Department of Physics, University of Massachusetts Boston, October 25 (2018).
11. “Quantum Entanglement Engineering”, Department of Chemistry, Boston University, October 24 (2018).
12. "Quantum Sensors Based on Interferometry", MIT Lincoln Lab, IEEE Photonics Seminar, April 25 (2018).
13. ''Quantum Simulation of Complex Physical Hamiltonians'', Colloquium, Department of Physics, University of Vienna, Vienna, Austria, November 16 (2017).
14. "Quantum Simulation of Physical Systems with Directionally Unbiased Linear-Optical Multiports'', Colloquium, Department of Information Engineering, University of Padua, Italy, November 9 (2017).
15. ‘’Quantum Optical Simulation of Complex Physical Hamiltonians'', Colloquium, Department of Physics, Purdue University, West Lafayette, IN, September 26 (2017).
16. "Quantum information processing and optical engineering with high-dimensional degrees of freedom", Colloquium, Department of Physics and Astronomy, CUNY, Hunter College, New York, November 10 (2016).
17. "Entangled and Correlated Orbital Angular Momentum (OAM) States in Effective Image Recognition and Quantum Communication”, Colloquium - Institute of Spectroscopy Russian Academy of Sciences, June 17 (2015).

18. “Efficient Quantum Imaging with Entangled and Correlated Orbital Angular Momentum (OAM) States”, UK/USA Quantum Imaging meeting, Marr Hall, Glasgow, UK, May 20-22 (2015).
19. “Practical Applications of High-Dimensional Hilbert Spaces”, Northrop-Grumman Quantum Sensing, Metrology, and Algorithms Workshop, Los Angeles, CA, December 8-9 (2014).
20. ''Effective Imaging Using High-Order Symmetry of Correlated Orbital Angular Momentum (OAM) States'', MIT Quantum Electronics Seminar Series, RLE, Cambridge, MA, March 5 (2014).
21. “High-efficiency object identification with entangled and correlated photons.”, Dept. of Physics Colloquium, University of Maryland Baltimore County, Baltimore, MD, April 10, (2013).
22. “Precise measurement and enhanced imaging with entangled andcorrelated photons”, Seminar MIT Physics Department, Center for Ultracold Atoms, February 28, (2013).
23. “Quantum Information Perspectives”, Special event for the “Quantum Future” Project, Department of Engineering of Informatics (DEI), University of Padova, Italy, October 3-4 (2011).
24. ''Dispersion and aberration cancellation with entangled photons and their applications'', INFN and Department of Physics Special Colloquium, University of Bari, Bari, Italy April 8 (2011).
25. ''Dispersion and aberration cancellation with entangled photons and their applications'', Department of Engineering of Informatics (DEI), University of Padova, Padova, Italy November 19 (2010).
26. ''Quantum Measurement with Non-classical Light'', Physics Department, Scuola Normale Superiore, Pisa, Italy, June 24 (2009).
27. ''Quantum Communication and Measurement with Non-classical Light'', Joint Colloquium Department of Physics and Fondazione Bruno Kessler, University of Trento, Trento, Italy May 21 (2009).
28. ''Quantum Communication and Measurement with Non-classical Light'', Dept. of Electrical Engineering and Dept. of Applied Physics, Yale University, New Haven, Connecticut, May 6 (2009).
29. ''Principles and Applications of Quantum Dispersion Cancellation with Entangled Photons'', Quantum Entanglement Workshop IEEE Photonics Society, Boston Photonics Society Chapter, MIT Lincoln Lab, Lexington, Massachusetts, April 22 (2009).
30. ''Quantum Communication and Precise Measurement with Entangled Photons, Special Seminar, Create-Net, University of Trento, Trento, Italy, February 29 (2008).
31. ''Quantum Cryptography and Secure Communication'', Special Seminar, GE Global Research Center, Albany, NY, January 31 (2008).
32. ''Phase-Sensitive Quantum-Optical Sensor'', DTO-PEPSI Review Meeting, Chico Hot Springs, Montana, August 28-29 (2007).
33. ‘’Applications of Infrared Photon Counting with Superconducting Single-Photon Detectors (SSPD)’’, Department of Information Engineering, University of Padua, Padua, Italy, July 4, (2007).

34. ''Secure Communication and Quantum Cryptography'', 10th Annual Boston University Photoniccs Centere Symposium ''Illuminating the Future of Light'', Boston, June 8, (2007).
35. “Precise Quantum-Optical Measurement with Engineered Entangled-Photon States”, Seminar Center for Microwave Magnetic Materials and Integrated Circuits, Department of Electrical and Computer Engineering, Northeastern University, November 16 (2006).
36. “Engineered Photon Entanglement and New Quantum-Optical Measurement Techniques”, FOCUS Seminar, Department of Physics, University of Michigan Ann Arbor, November 9 (2006).
37. ''Engineering Quantum Entanglement for Precise Optical Measurement'', Colloquium, Institute for Fundamental Electronics, Orsay, France, September 22 (2006).
38. ''Quantum-Optical Measurement With Specially Engineered Entangled-Photon States'', Department of Physics Colloquium, Vanderbilt University, Nashville, Tennessee, February 24 (2006).
39. ''Quantum Communication and Precise Optical Measurement with Engineered Entangled-Photon States'', Special Seminar Department of Physics and Astronomy, University of Leeds, Leeds, UK February 8 (2006).
40. ''Quantum Optical Measuremet with Specially Engineered Entangled-Photon States'', Deaprtment of Astronomy, University of Padova, Italy, November 25 (2005).
41. "Quantum Bio-Photonics With Specially Engineered Entangled-Photon States", Laser and Nnonlinear Optics Seminar, Physics Department, ETH Zurich, November 7 (2005).
42. ''Optical Entanglement in Quantum Cryptography and Precise Quantum Measurement'', Distinguished Lectures Series, Department of Physics, University of Padova, Italy, June 1 (2005).
43. ''Engineered Entanglement in Quantum Cryptography and Quantum Measurement'', Seminar, Department of Physics, University of Pavia, Italy, May 19 (2005).
44. ''Entanglemen as a Resourse for Quantgum Communication and Precise Optical Measurememnt'' Seminar, Center for Ultracold Atoms and Department of Physics, Harvard University, April 12 (2005).
45. ''Engineeried Entanglement for Quantum Communicatrion and Quantum Measurement'', Photonics and Optoelectronics Seminar, Department of Physics, MIT, April 6 (2005).
46. ''Engineering Entangled States for Quantum Cryptography'', Talk at the special Symposium on Practical Quantum Cryptography, Genoa, Italy, November 16 (2004).
47. ''Engineering Quantum Entanglement: Creation and Applications of Optical Entanglement'', Special Seminar at Department of Physics, Universirty Paris VI, Paris, France, October 26 (2004).
48. ''Quantum Correlation and Quantum Entanglement: Generation and Applications'', Set of lectures for graduate students at the Department of Science and Physics, Universirty of Insubria, Como, Italy, October - November (2004).
49. ''Quantum Bio-Photonics'', Seminar at the Department of Physics, University of Geneva, Geneva, Switzerland, June 30 (2004).

50. ''Entanglement Engineering'', Seminair du Laboratoire Kastler Brossel, Ecole Normale Superieure, Raris, France, Juin 22 (2004).
51. “Engineering Entanglement: from Quantum Information to Quantum Metrology”, Special Seminar at the Department of Physics, University of Genoa, Genoa, Italy, June 16 (2004).
52. “Engineering Complex Entangled Systems: from Quantum Cryptography to Quantum Computation”, Special Seminar at “Una Scocieta Finmeccannica”, Rome, Italy, June 2 (2004).
53. ''Engineered Entanglement: from Quantum Cryptography to Quantum Bio-Photonics'', Special Seminar at the Department of Electrical Engineering, University of Genoa, Genoa, Italy, May 31 (2004).
54. "Hyper-Entangled Quantum States in Quantum Information Processing and Precise Optical Measurement", Center Vito Voltera, Special Seminar at the University of Rome II, Tor Vergata, Rome, Italy, May 3 (2004).
55. “Single-Photon Correlatioon Measurement With Superconductibnd Detectors'', Pirelli Research Laboratories, Milan, Bicocca, March 12 (2004).
56. “Designing quantum entanglement for practical applications in bio-technology and quantum information processing", Special Colloquium, ICFO-Institut de Ciències Fotòniques, Polytechnic University of Catalonia, Barcelona, Spain, March 10 (2004).
57. “Engineering quantum entanglement for practical quantum information processing and precise optical measurements", Special Seminar, Istituto Elettrotecnico Nazionale (IEN) Galileo Ferraris, Torino, Italy, March 5 (2004).
58. “Quantum Information Processing and Precise Optical Measurement with Entangled Photons”, Special seminar at the Space and Naval Warfare Systems Center (SPAWARS), San Diego, California, August 5 (2003).
59. “Quantum Computing, Quantum Communication, and Quantum Measurement with Entangled Photons”, Joint Colloquium Pirelli Research Laboratories and University of Milan, Bicocca, March 12 (2003).
60. “Quantum Optical Measurement with Entangled Photons”, Special Seminar, Laboratory of Condensed Matter Physics, University of Nice Sophia Antipolis, Nice, France, March 3 (2003).
61. “Quantum Information Processing and Precise Optical Measurement with Entangled Photons”, Colloquium, Department of Electrical and Computer Engineering, University of California San Diego, La Jolla, CA, February 21 (2003).
62. “Quantum Information Processing and Precise Optical Measurement with Entangled Quantum States”, MIT QIP Seminar, Cambridge, MA, February 10 (2003).
63. “Quantum Information Procesing and Optical Measurement with Hyper-entangled States”, Colloquium at the Institute of Optics, University of Rochester, Rochester, NY December 11 (2002).
64. “Entangled States for Quantum Information Processing and Optical Measurement”, Seminar at the Department of Physics, University of Toronto, Canada, November 26 (2002).

65. “Precise Optical Measurement and Secure Communication with Hyper-Entangled States”, Seminar at the Istituto Nazionale di Ottica Applicata, Florence, Italy, October 23 (2002).
66. “Quantum Information Processing and Quantum Metrology with Entangled States”, Theoretical Division seminar, Los Alamos National Laboratory, Los Alamos, NM, October 17 (2002).
67. ''Secure Communication and Materials Characterization with Quantum States'', Seminar at Pirelli Research Labs, Milan, Italy, September 2 (2002).
68. Set of lectures “Quantum Information Processing and Precise Optical Measurements with Hyper-Entangled States”, NATO Advanced Study Institute on Quantum Information and Information Technologies, Ankara-Antalya, Turkey, June 3-14 (2002).
69. “Quantum Information Processing and Quantum Metrology with Entangled States”, Laboratoire Kastler Brossel, Universite Paris 6 Pierre and Marie Curie, Paris, France, May 27 (2002).
70. "Entangled photons: from basic physics to quantum engineering", Colloquium, Physics Department, University of Connecticut, Storrs, CT, February 19 (2001).
71. “Quantum Engineering and Metrology with Entangled Photons”, Special seminar National Institute of Standards and Technology (NIST) Boulder, Colorado, October 10 (2000).
72. A set of lectures on "Quantum Metrology and Nondemolition Measurement", "Enrico Fermi" Summer School "Recent Advances in Metrology and Fundamental Constants", Varenna, Italy, July 25 - August 4 (2000).
73. “Engineering Entangled-Photon Sates Using Spontaneous Parametric Down Conversion”, Special Seminar at Karl Zeiss, Jena, Germany, July 29 (2000).
74. "Quantum Cryptography with Polarized Entangled Photons", Boston Chapter of the IEEE Communications Society, Boston, April 13, (2000).
75. "Hyper-Entangled States and Femtosecond Parametric Down Conversion", Harvard-Smithsonian Center for Astrophysics, Harvard University, February 23, (2000).
76. "Femtosecond Parametric Down Conversion and Quantum Entanglement'', Department of Physics, University of Vienna, Austria, July 13, (1999)
77. ‘’Quantum Cryptography and Optical Metrology With Polarized Entangled Photons’’, Department of Physics, University of Bari, Italy, May 31, (1999).
78. " Quantum Cryptography and Optical Metrology With Polarized Entangled Photons'', Physics Colloquium, Department of Physics, University of Genoa, Italy, February 25, (1999).
79. "Polarized Entangled Photons in Quantum Communications and Optical Metrology", "Frontiers in Photonics" seminar series, Photonics Research Ontario Center, Department of Physics, University of Toronto, Canada, January 27 (1999).
80. “Quantum Cryptography and Optical Metrology With Polarized Entangled Photons” Department of Physics, University of Milan, Italy, July 24 (1998).
81. “Two-Photon Entangled States: Basic Questions of Quantum Mechanics and Novel Techniques in Physics Research, Metrology, and Communications”, General Research

institute for Physics of the Hungarian Academy of Sciences, Budapest, Hungary, May 29 (1998).

82. “Two-Photon Entangled States: Basic Questions of Quantum Mechanics and Novel Techniques in Physics Research, Metrology, and Communications”, Worcester Polytechnic Institute (WPI), Worcester, MA, April 13 (1998).
83. ‘’Violation of Bell’s inequalities, generation of “rectangular photons’’, and development of ultra-sensitive measurement techniques using two-photon entangled states, Atomic and Optical Physics Seminar, Physics Department, MIT, Boston, MA, December 5 (1997).
84. "Two-photon States and new Techniques In Metrology and Communications", Electrotechnical Institute Gallileo Ferraris, Turin, Italy, July 15 (1996).
85. "Two-Photon Entangled States And Novel Techniques In Physics Research, Metrology, and Communications", Department of Applied Physics, University of Geneva, Geneva, Switzerland, July 3 (1996).
86. "Nonlocality in Quantum Mechanics: Demonstration of Two-Photon Geometric Optics", Department of Physics, University of Rome, Italy, February 29, (1996).
87. "Correlated Photon Applications: Standardless Radiometry, Sub-Femtosecond Timing and Beyond", Physics Laboratory, National Institute of Standards and Technology, Gaithersburg, Maryland, January 31, (1996).
88. "'Ghost' Imaging and Interference-Diffraction by Means of Two-Photon Quantum Correlations", Physics Laboratory, National Institute of Standards and Technology, Gaithersburg, Maryland, April 12, (1995).
89. "Two-Photon Quantum Optics. (Experimental Study)", Department of Physics, Texas A&M University, College Station, Texas, February 14, (1995).
90. "Type-II Parametric Down Conversion - New Source of Entangled States", Department of Experimental Physics, University of Innsbruck, Innsbruck, Austria, September 4, (1994).
91. "New Techniques for Optical Measurement Based on Quantum Two-Photon Field", National Institute of Standard and Technology, Gaithersburg, Maryland, Nov. 12, (1993).

University Committees:

BU, College of Engineering, Appointment, Promotion, and Tenure Committee

ECE Planning Committee

ECE Electro Physics Faculty Coordinator

ECE Appointment, Promotion, and Tenure Committee.

ECE LEAP Adviser

BU Laser Safety Committee

ECE Graduate Committee

ECE Undergraduate Committee

Editorial Boards:

Associate Editor "Journal of Optics" IOP

Associate Editor "Physical Review Letters" APS

Organizing and Program Committees:

1. SPIE "Optics + Photonics", San Diego, CA, August 18-22 (2024).
2. SPIE Conference "Photonics for Quantum", Waterloo, Ontario, Canada, June 17-20 (2024)
3. SPIE "Defense + Commercial Sensing", Maryland, April 24-25, (2024).
4. SPIE Conference "Photonics for Quantum", Rochester Polytechnic Institute, Rochester, NY, June 5-8 (2023).
5. SPIE "Optics + Photonics", San Diego, CA, August 22-24 (2023).
6. SPIE "Defense + Commercial Sensing" Orlando, Florida, April 30 – May 4 (2023).
7. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2022", San Diego, California, August 19 – 23 (2022).
8. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2021", San Diego, California, August 21 – 25 (2021).
9. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2020", San Diego, California, August 17 – 21 (2020).
10. CLEO 2019 Laser Science to Photonics Applications, San Jose, California, May 5-10 (2019).
11. XVI International Conference on Quantum Optics and Quantum Information (ICQOQI'2019) Minsk, Belarus, May 13-17, (2019)
12. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2019", San Diego, California, August 13 – 15 (2018).
13. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2017", San Diego, California, August 6 – 10 (2017).
14. Centennial OSA Annual meeting - Frontiers in Optics and Laser Science FiO/LS 2016, Rochester, New York, October 17-21 (2016). **(Sub-Committee Chair)**
15. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2016", San Diego, California, August 28 – September 1 (2016).
16. Quantum Information and Computation XIV as a part of SPIE DSS Sensing, Technology + Applications, Baltimore, Maryland, April 17-21 (2016).

17. Editor - special issue "Quantum Metrology", International journal "Technology", (2015)
18. International conference Frontiers in Optics and Laser Science FiO/LS 2015, San Jose, California, October 18-22 (2015). **(Sub-Committee Chair)**
19. Quantum Information and Computation XIII as a part of SPIE DSS Sensing, Technology + Applications, Baltimore, Maryland, April 20-24 (2015).
20. International conference Frontiers in Optics and Laser Science FiO/LS 2014, Tucson, Arizona, October 19-23 (2014). **(Sub-Committee Chair)**
21. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2014", San Diego, California, August 17 - 23 (2014).
22. Symposium on Quantum Information and Computation XII as a part of SPIE Symposium on Defense & Security, Baltimore, Maryland, May 5 – 9 (2014).
23. SPIE Photonics Europe 2014, Photonics, Optics, Lasers, Micro- and Nanotechnologies, Brussels, Belgium, 14-17 April (2014). **(Conference Chair)**
24. Symposium on Quantum Information and Computation as a part of OSA International conference Frontiers in Optics and Laser Science FiO/LS 2013, Orlando, Florida, October 6-10 (2013).
25. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2013", San Diego, California, August 25 - 29 (2013).
26. International Conference on Squeezed States and Uncertainty Relations, ICSSUR 2013, University of Erlangen-Nuremberg, Nuremberg, Germany, June 24-28 (2013).
27. Symposium on Quantum Information and Computation XI as a part of SPIE Symposium on Defense & Security, Baltimore, Maryland, April 29 – May 3 (2013).
28. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2012", San Diego, California, August 1 - 5 (2012).
29. Symposium on Quantum Information and Computation as a part of SPIE Symposium on Defense & Security, Baltimore, Maryland, April 23 – 27 (2012).
30. Conference on Quantum Optics, 2012 SPIE Photonics Europe, Brussels, Belgium, April 16-19, (2012)
31. Quantum Information and Measurement, OSA Research in Optical Sceicnes Congress, Berlin, Germany, March 19-21 (2012) **(General Chair)**
32. Quantum Sciences Symposium, Quantum biology and Quantum Information, Computing & Communication, Cambridge, MA, September 26-27 (2011)
33. IEEE Photonics Society, Summer Topicals 2011, Montreal, Quebec, Canada, July 18-20 (2011).
34. OSA International Conference on Quantum Information (ICQI), Ottawa, Canada, June 5-8 (2011). **(Program Chair)**

35. Symposium on Quantum Information and Computation as a part of SPIE Symposium on Defense & Security, Orlando, Florida, April 28 – 29 (2011).
36. International Conference on Quantum Information and Computation, NORDITA, Stockholm, Sweden, October 4-8 (2010).
37. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2010", San Diego, California, August 1 - 5 (2010).
38. XIII International Conference on Quantum Optics and Quantum Information, Kyiv, Ukraine, May 28 – June 1 (2010)
39. Conference on Quantum Optics, 2010 SPIE Photonics Europe Symposium, Brussels, Belgium, April 12-16, (2010)
40. Symposium on Quantum Information and Computation as a part of SPIE Symposium on Defense & Security, Orlando, Florida, April 5 – 9 (2010).
41. Optical Fiber Communication Conference and Exposition (OFC) and the National Fiber Optic Engineers Conference (NFOEC), San Diego, California, March 21-25, (2010).
42. International Conference on Quantum Communication and Quantum Networking, QuantumComm 2009, Vico Equense, Sorrento peninsula, Naples, Italy, October 26-30 (2009). **(General Chair)**
43. Fourth International ICST Conference on Nano-Networks, Nano-Net 2009, Switzerland, October 18-20 (2009).
44. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2009", San Diego, California, August 4 - 6 (2009).
45. Workshop on Nano, Molecular, and Quantum Communications (NanoCom 2009) (in conjunction with ICCCN 2009, San Francisco, CA, USA August 2 - 6 (2009).
46. Joint Symposium "Quantum states of light on demand: concepts to applications" as part of the Conference on Lasers and Electro-Optics Europe (CLEO/Europe) and European Quantum Electronics Conference (EQEC) 2009, Munich, Germany, June 14-19 (2009).
47. Symposium on Quantum Information and Computation as a part of SPIE Symposium on Defense & Security, Orlando, Florida, April 14 - 16 (2009).
48. International Conference on Personal Satellite Services 2009 (PSATS 09), Rome, Italy, March 19-20, (2009)
49. Optical Fiber Communication Conference and Exposition (OFC) and the National Fiber Optic Engineers Conference (NFOEC), San Diego, California, March 22-26, (2009).
50. International Conference on Quantum, Nano and Micro Technologies, 2009 ICQNM TPC, Cancun, Mexico, French Caribbean, February 1-6 (2009).
51. Program Committee of a conference named ''Quantum Communications Realized II'' within the SPIE Optics West 2009, San Jose, CA, January 24 - 29 (2009).

52. International Advisory Board, XII International Conference on Quantum Optics and Quantum Information, Vilnius, Lithuania, September 20-23 (2008).
53. 3rd International Conference on Nano-Networks, Boston, Massachusetts, September 15-17, (2008).
54. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2008", San Diego, California, August 10 - 14 (2008).
55. Symposium on Quantum Information and Computation as a part of SPIE Symposium on Defense & Security, Orlando, Florida, March 16 -20 (2008).
56. International Conference on Quantum, Nano and Micro Technologies, 2008 ICQNM TPC, Martinique, French Caribbean, February 2-4 (2008).
57. Symposium Quantum Communications Realized, SPIE Optics East, Boston, MA, September 9-12 (2007).
58. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2007", San Diego, California, August 26 - August 30 (2007).
59. CLEO/Europe, International Quantum Electronics Conference IQEC, Munich, Germany, June 17 – 22, (2007).
60. International Conference on Coherent and Nonlinear Optics ICONO-2007, Minsk, Belarus, May 28 – June 1 (2007).
61. Symposium on Quantum Information and Computation as a part of SPIE Symposium on Defense & Security, Orlando, Florida, March 26-31 (2007).
62. International Conference on Quantum, Nano and Micro Technologies, 2007 ICQNM TPC, Guadeloupe, French Caribbean, January 2-4 (2007)
63. Symposium on Quantum Communications and Quantum Imaging, as a part of SPIE Annual Meeting "Optics and Photonics 2006", San Diego, California, August 13 - August 17 (2006).
64. Symposium on Quantum Information and Computation as a part of 19th Annual International SPIE Symposium on Defense & Security, Orlando, Florida, April 17-22 (2006).
65. International Workshop on Linear Optical Quantum Information Processing (LoQuIP), University of Louisiana, Baton Rouge, April 9-12 (2006).
66. Guest Editor, Special Issue of Journal of Modern Optics: "Quantum Imaging", v. 53, No. 5-6, pp. 573-864 (2006).
67. Symposium on Quantum Communications and Quantum Imaging, as a part of 50th SPIE Annual Meeting "Optical Sciences and Technology", San Diego, California, July 30 - August 4 (2005).
68. International Conferences on Coherent and Nonlinear Optics ICONO-2005, St. Petersburg, Russia, May 11-15 (2005)
69. 9th International Conference on Squeezed States and Uncertainty Relations, ICSSUR'2005, Besancon, France, May 2-6 (2005).

70. Symposium on Quantum Information and Computation as a part of 18th Annual International SPIE Symposium on Defense & Security, Orlando, Florida, March 26-31 (2005).
71. Festival Della Scienza as a part of the program “Genoa – European Capital of Culture 2004”, Genoa, Italy, November 4-5 (2004).
72. International Workshop “Imaging at the Limits”, Cargese, Corsica, France, September 6-11 (2004).
73. Symposium on Quantum Communications and Quantum Imaging II (AM112), as a part of 49th SPIE Annual Meeting “Optical Sciences and Technology”, Denver, Colorado, August 2-6 (2004).
74. Symposium on Quantum Information and Computation (or18) as a part of 17th Annual International SPIE Symposium on Defense & Security, Orlando, Florida, April 12-16 (2004).
75. Guest Editor, Journal of Optics B: Quantum and Semiclassical Optics, v. 5, No.4 457 (2003).
76. Symposium on Quantum Communications and Quantum Imaging, as a part of 48th SPIE Annual Meeting “Optical Sciences and Technology”, San Diego, California, August 3-8 (2003).
77. European Quantum Electronics Conference EQEC-2003, Munich, Germany, June 23-27 (2003).
78. Symposium on Quantum Information and Computation (or12) as a part of 16th Annual International SPIE Symposium on AeroSence, Orlando, Florida, April 21-25 (2003).
79. Eighteenth International Conference on Atomic Physics (ICAP 2002), MIT, Cambridge, MA, July 28 to August 2, (2002)
80. Wigner Centennial Conference Pecs, Hungary, July 8-12, (2002).
81. Guest Editor, Journal of Optics B: Quantum and Semiclassical Optics, v. 4, No.3 (2002).
82. International Quantum Electronics Conference IQEC-2002, Moscow, Russia, June 22 - June 28 (2002).
83. XVII International Conference on Coherent and Nonlinear Optics (ICONO 2001), Minsk, Belarus, June 26 – July 1 (2001).
84. VII International Conference on Squeezed States and Uncertainty Relations, Boston University, Boston, MA, June 4-8, (2001). Principal organizer.
85. European International Quantum Electronics Conference IQEC-Europe 2000, Special Symposium on "Entanglement in Optical and Atomic Physics", September 10-15, Nice, France (2000).
86. International Advisory Committee, VI International Conference on Squeezed States and Uncertainty Relations, May 24-29, Naples, Italy, (1999).
87. Optical Society of America Annual Meeting, Symposium on Ultrafast Quantum Optics, Baltimore October 4-8, (1998).
88. V International Conference on Squeezed States and Uncertainty Relations, June 27-July 1, Balatonfured, Hungary, (1997).

89. IV International Conference on Squeezed States and Uncertainty Relations, June 5-8, Taiyuan, China, (1995).
90. Third International Workshop on Squeezed State and Uncertainty Relations, UMBC, Maryland, Aug. 10-13 (1993).

Consulting for Agencies and Organizations:

1. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, May (2024).
2. European Commission Marie Curie Fellowship program, remote evaluation of proposals, November-December (2023).
3. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, May (2023).
4. Dean Catalyst Award evaluation (2022).
5. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, November (2022).
6. European Science Foundation, evaluation of science grants, June (2022).
7. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, May (2022).
8. European Commission Marie Curie Fellowship program, remote evaluation of proposals, November-December (2021).
9. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, August (2021).
10. DOE, QIS Research Centers Review, remote evaluation and panels July 20 and July 23 (2021).
11. DOE, Office of Biological & Environmental Research (BER) within the Department of Energy Office of Science, Remote review of proposals and panel evaluation, May 24-25 (2021).
12. National Science Foundation, Atomic, Molecular and Optical Physics Program, Remote Evaluation of Proposals, February (2021).
13. King Abdullah University of Science and Technology, remote evaluation of research proposals, November (2020).
14. European Commission Marie Curie Fellowship program, remote evaluation of proposals, October-November (2020).
15. Russian Ministry of Education, Department of Mega-grants, remote evaluation of research proposals, October (2020).
16. Tianjin University, China, School of Precision Instrumentation and Opto-Electronic Engineering, Evaluation of faculty for promotion, September (2020).
17. NSF, Physics program, remote evaluation of research proposals, September (2020).

18. Swiss National Science Foundation, remote evaluation of research proposals, May (2020).
19. Canada Natural Sciences and Engineering Research Council of Canada (NSERC), Chair of the Committee for research center proposals evaluation, May (2020).
20. Tianjin University, China, School of Precision Instrumentation and Opto-Electronic Engineering, Evaluation of faculty for promotion, October (2019).
21. Russian Ministry of Education, Department of Mega-grants, remote evaluation of proposals, October (2019).
22. European Commission Marie Curie Fellowship program, remote evaluation of proposals, November (2019).
23. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, August (2019).
24. Department of Energy, remote evaluation of proposals, May (2019)
25. Singapore National Research Foundation (NRF) Competitive Research Program (CRP) remote evaluation of proposals, December (2018).
26. Tianjin University, China, School of Precision Instrumentation and Opto-Electronic Engineering, Evaluation of faculty for promotion, October (2018).
27. European Commission Marie Curie Fellowship program, remote evaluation of proposals, October (2018).
28. Foundation for Polish Science, remote evaluation of proposals, May (2018).
29. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, April (2018).
30. Tianjin University, China, School of Precision Instrumentation and Opto-Electronic Engineering, Evaluation of faculty for promotion, November (2017).
31. European Commission QuantERA program, remote evaluation of proposals, September (2017).
32. Russian Ministry of Education, Department of Mega-grants, remote evaluation of proposals, September (2017).
33. Czech Science Foundation, Physical Sciences, remote evaluation of proposals, June (2017).
34. Belgium National Fund for Scientific Research – FNRS, evaluation of Excellence of Science Grants, May-June (2017).
35. European Commission, European Research Council (ERC) grants evaluation, April (2017).
36. National Science Foundation, AFRI program, remote and panel evaluation of proposals, Arlington, VA, April 25 (2017).
37. BU, ENG Deans Catalyst Award, evaluation proposals and panel deliberation, April (2017).
38. National Science Foundation, Directorate of Engineering, remote and panel evaluation of proposals, Arlington, VA, March 22-23 (2017).

39. The Royal Society Innovation Award, UK, remote evaluation of proposals, September (2016).
40. Tianjin University, China, remote evaluation of proposals, August – October (2016).
41. CERC, Canada Research Chairs Program, remote evaluation of proposals, August (2016).
42. German Research Foundation DFG, remote evaluation of proposals, July (2016).
43. Foundation for Polish Science, remote evaluation of proposals, June (2016).
44. Swiss State Secretariat for Education, Research and Innovation SERI, remote evaluation of research proposals, April (2016).
45. National Science Foundation, Physics Directorate, remote evaluation of research proposals, March (2016).
46. Belgium National Fund for Scientific Research – FNRS evaluation of Grants and Fellowships March-April (2016).
47. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada, evaluation of DISCOVERY grants, January (2016).
48. Russian Science Foundation, remote evaluation of research proposals November (2015).
49. Natural Sciences and Engineering Research Council of Canada (NSERC), remote evaluation of CREATE grants, November (2015).
50. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, May-June (2015).
51. Austrian Science Fund, remote evaluation of research proposals, April (2015).
52. Belgium National Fund for Scientific Research – FNRS, remote evaluation of Grants and Fellowships March-April (2015).
53. Singapore NRF Competitive Research Program (CRP) Grant evaluation, March (2015).
54. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada, Discovery grants remote review, January (2015).
55. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, November-December (2014).
56. Ministero dell'Università e della Ricerca (MIUR), Italy, Evaluation of Proposals, November (2014).
57. Belgium National Fund for Scientific Research – FNRS, evaluation of proposals, March-April (2014).
58. National Science Foundation, Directorate for Engineering, ECCS Program, Panel Evaluation of Proposals, February 24-25 (2014).
59. Singapore National Research Foundation, remote evaluation of proposals, February (2014)
60. National Science Foundation, Physics Division Program, remote evaluation of proposals, February (2014).

61. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada, Discovery grants remote review, January (2014).
62. Ministero dell'Università e della Ricerca (MIUR), Italy, Evaluation of Full Proposals, PRIN program, July (2013).
63. Canada Foundation for Innovation, CFI Leaders Opportunity Fund - Canada Excellence Research Chairs Grant Proposal review April (2013).
64. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open-XTrack category, March-May (2013).
65. Ministero dell'Università e della Ricerca (MIUR), Italy, Evaluation of Proposals, March (2013).
66. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada, Discovery Grant Proposal review January (2013).
67. European Commission, Office of Future and Emerging Technologies (FET-ICT), Review and panel evaluation of Quantum Information Processing and Communication (QIPC) projects, Brussels, Belgium, June 4-7 (2012).
68. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, May (2012).
69. Belgium National Fund for Scientific Research – FNRS, evaluation of proposals, March-April (2012).
70. Austrian Science Fund – evaluation of proposals, March-April (2012).
71. National Science Foundation, Atomic, Molecular and Optical Physics Program, Remote Evaluation of Proposals, February (2012).
72. Israel Science Foundation, Remote evaluation of projects, February-March (2012).
73. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, November-December (2011).
74. Belgium National Fund for Scientific Research – FNRS, evaluation of proposals, August - September (2011).
75. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, June-August (2011).
76. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada, Prpopsal review July (2011).
77. Israel Science Foundation, Remote evaluation of projects, February-March (2011).
78. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, February (2011).
79. National Science Foundation, Engineering Program, Remote Evaluation of Proposals, November (2010).
80. Belgium National Fund for Scientific Research – FNRS, evaluation of proposals, September (2010).
81. European Commission, Office of Future and Emerging Technologies (FET-ICT), Review and panel evaluation of projects, Brussels, Belgium, September 13-16 (2010).

82. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada, Prpopsal review August (2010).
83. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada Research Chair in Quantum Communication, Progress Review, July (2010).
84. Belgium National Fund for Scientific Research – FNRS, evaluation of proposals, May (2010)
85. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, February (2010).
86. National Science Foundation, Physics Program, Remote Evaluation of Proposals, November-Decemer (2009).
87. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, October (2009).
88. Ministero dell'Università e della Ricerca, Italy, Evaluation of PRIN Proposals, August-September (2009).
89. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open-Short category, May-August (2009).
90. Natural Sciences and Engineering Research Council of Canada (NSERC) Canada Research Chair in Quantum Communication, Progress Review, February (2009).
91. European Commission, Office of Future and Emerging Technologies (FET-ICT), Review and panel evaluation of Quantum Information Processing and Communication (QIPC) projects, Gothenburg, Sweden, March 4-6 (2009).
92. Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Projects Supplemental Program, Progress Review, February (2009).
93. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, February (2009).
94. European Commission, Office of Future and Emerging Technologies (FET-ICT), Remote Evaluation of Proposals in Open category, October (2008).
95. Ministero dell'Università e della Ricerca, Italy, Evaluation of PRIN Proposals, March-April (2008).
96. European Commission, Office of Future and Emerging Technologies (FET-ICT), Review and panel evaluation of Quantum Information Processing and Communication (QIPC) projects, Paris, France, March 3-5 (2008).
97. European Commission, Office of Future and Emerging Technologies (FET-IST), Remote Evaluation of Proposals in Open and Open/Short categories, February (2008).
98. Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Projects Supplemental Program, Evaluation of Projects, November (2007).
99. European Commission, Office of Photonics Research (Photonics-IST), Proposal evaluation panel, Brussels, Belgium, November 5-7 (2007).
100. European Commission, Office of Photonics Research (Photonics-IST), Remote Evaluation of Proposals in NE and IP categories, October (2007).

101. European Commission, Office of Future and Emerging Technologies (FET-IST), Remote Evaluation of Proposals in Open and Open/Short categories, October (2007).

102. NASA Postdoctoral Program, Evaluation of applications. August 1 – 17 (2007).

103. NASA Postdoctoral Program, Evaluation of applications. May 5 – 15 (2007).

104. European Commission, Office of Future and Emerging Technologies (FET-IST), Review and panel evaluation of Quantum Information Processing and Communication (QIPC) projects, Oxford, UK, February 28 – March 1 (2007).

105. Natural Sciences and Engineering Research Council of Canada (NSERC), Site visit and panel evaluation of Canada Industrial research Chair in quantum cryptography and communication, University of Calgary, Calgary, Alberta, Canada, January 29-31 (2007).

106. Canada Foundation for Innovation, Proposal review, September (2006).

107. Natural Sciences and Engineering Research Council of Canada (NSERC), Site visit and evaluation of Institute for Quantum Computing (IQC), University of Waterloo, Ontario, Canada, September 8 (2006).

108. European Commission, Office of Future and Emerging Technologies (FET-IST), Remote Evaluation of Proposals in Open and Open/Short categories, November – December (2005).

109. European Commission, Office of Future and Emerging Technologies (FET-IST), Panel Evaluation of Projects FET-OPEN, Brussels, Belgium, June 20-22 (2005).

110. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Evaluation of research projects, May-June (2005).

111. Italian Ministry for Education, University and Research (MIUR), Evaluation of performance of national research centers, May (2005).

112. Natural Sciences and Engineering Research Council of Canada (NSERC), Site visit and evaluation of Research Network "Quantum Works – a Canadian Quantum Information Network", University of Waterloo, Ontario, Canada, April 25-27 (2005).

113. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Evaluation of research projects, March-April (2005).

114. European Commission, Office of Future and Emerging Technologies (FET-IST), Evaluation of Projects on Quantum Information and Communication, Innsbruck, Austria, February 14-16 (2005)

115. European Commission, Office of Future and Emerging Technologies (FET-IST), contribution to the European roadmap in Quantum Information Processing, January (2005).

116. European Commission, Office of Future and Emerging Technologies (FET-IST), Special Workshop on Perspectives of QIPC in the 7th European Framework, Rome, Italy, September 21 (2004).

117. Italian Ministry for Education, University and Research (MIUR), Evaluation of research projects, May-June (2004).

118. European Commission, Office of Future and Emerging Technologies (FET-IST), Special event QIPC-2004, Brussels, Belgium, June 3-4 (2004).

119. Netherlands Foundation for Fundamental Research on Matter (FOM), evaluation of research proposals, April (2004).

120. Science & Engineering Research Council (SERC) of Singapore, evaluation of research proposals, March (2004).

121. European Commission, Office of Future and Emerging Technologies (FET-IST), Evaluation of Projects on Quantum Information and Communication, Bratislava, Slovakia, February 16-19 (2004).

122. John D. and Catherine T. MacArthur Foundation, Evaluator and Nominator September – December (2003).

123. External Reviewer for The Cambridge (UK) - MIT Institute (CMI) project on Quantum Information and Technology, November 10 (2003).

124. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Evaluation of research projects, September (2002).

125. Italian Ministry for Education, University and Research (MIUR), Evaluation of research projects, May-June (2002).

126. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Evaluation of research projects, April-May (2002).

127. European Commission, Office of Future and Emerging Technologies (FET), Evaluation of proposals and panel review on Quantum Information research, Brussels, Belgium, April 15-19, (2002).

128. National Science Foundation, Division of Communication and Computer Research, New program development workshop, Elmsford, NY, January 17-18, (2002).

129. DARPA-QUIST Workshop, Dallas, Texas, November 25-28, (2001).

130. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Evaluation of research projects, July-August (2001).

131. Italian Ministry Program for funding of University Research (MURST), Evaluation of research projects, May-July (2001).

132. Photonics Research Ontario, Evaluation of research projects. May (2001).

133. Bank of America, Evaluation of research projects. April (2001).

134. National Science Foundation, Information Technology Research (ITR) program panel. Evaluation of research projects - February 5-6, (2001).

135. Science Foundation Ireland, Evaluation of research projects, December 2000 – January 2001.

136. European Commission, Office of Future and Emerging Technologies (FET), Evaluation of proposals on Quantum Information research, Brussels, Belgium, January (2001).

137. Italian Ministry Program for funding of University Research (MURST), Evaluation of research projects, June-August (2000).

138. Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Evaluation of research projects, June-July (2000).

139. European Commission, Office of Future and Emerging Technologies (FET), Special Workshop to develop a new program on Quantum Information, Brussels, Belgium, April 11, (2000).

140. National Science Foundation, Division of Atomic, Molecular, and Optical Physics (DAMOP), Evaluation of research proposals January (2000).

141. DARPA, ITO, DSO, Special Quantum Internet (QNET) Workshop, Santa Barbara, California, January 4, (2000).

142. National Science Foundation, Engineering Directorate - SBIR proposal evaluation panel - September 26-29, (1999).

143. National Science Foundation, Directorates of Physics, Engineering, Computer and Information Sciences - New program development workshop (Information Technology Research) - October 28-30, (1999).

Referee research papers for:

1. Nature
2. Nature Physics
3. Nature Photonics
4. Nature Communications
5. Nature Scientific Reports
6. Nature Light
7. Science
8. Physical Review Letters
9. Physical Review A
10. Physical review B
11. Physical review X
12. Optics Letters
13. Optica
14. JOSA B
15. Advances in Optics and Photonics
16. Applied Optics
17. Applied Physics Letters
18. European Physics Journal A, D
19. Journal of the European Optical Society A, B
20. Physics Letters A
21. Optics Communications

22. Journal of Physics A
23. Foundations of Physics
24. American Journal of Physics
25. Quantum Information & Computation
26. IEEE Photonics Technology Letters
27. IEEE Journal of Quantum Electronics
28. Optics Express
29. New Journal of Physics
30. Journal of Physical Chemistry
31. Europhysics Letters
32. Quantum Information Processing
33. Journal of Optics
34. Nanoletters
35. Advances in Optical Technologies
36. Quantum Information Processing
37. IEEE Computers
38. Entropy