Curriculum Vitae: Alexander L. Gaeta

Address: Department of Applied Physics and Applied Mathematics
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Education: B. S. (1983), M. S. (1985), and Ph. D (1991) in Optics, University of Rochester

Research Interests: Ultrafast nonlinear optics, nanophotonics, nonlinear propagation in fibers and bulk media, photonic crystal fibers, optical frequency combs, coherent interactions of laser light with matter, application of nonlinear optics to quantum information, stimulated scattering processes.

Professional Positions

David M. Rickey Professor of Applied Physics, Columbia University, 2015-.
Editor-in-Chief, *Optica*, Optical Society of America (2013 -).
Samuel B. Eckert Professor of Engineering, School of Applied and Engineering Physics, Cornell University, 2013-2015.
Director, School of Applied and Engineering Physics, Cornell University, 2011 - 2014.
Director, NSF Center for Nanoscale Systems in Information Technologies, Cornell University, 2007-2012.
Co-founded (w/ Michal Lipson and Alex Cable) PicoLuz, Inc., 2010.

Selected Publications [Total: 220, Total citations: >21,000, *h*-index: 75 (Google Scholar)]

1. C. Joshi, A. Farsi, S. Clemmen, S. Ramelow, and A. L. Gaeta, "Frequency multiplexing for quasi-deterministic heralded single-photon sources," *Nature Comm.* **9**, 847 (2018).
2. M. Yu, J. K. Jang, Y. Okawachi, A. G. Griffith, K. Luke, S. A. Miller, X. Ji, M. Lipson, and A. L. Gaeta, "Breather soliton dynamics in microresonators," *Nature Comm.*, **8**, 14569 (2017).
3. S. Clemmen, A. Farsi, S. Ramelow, and A. L. Gaeta, "Ramsey interference with single photons," *Phys. Rev. Lett.* **117**, 223601 (2016).
4. Y. Okawachi, M. Yu, K. Luke, D. O. Carvalho, M. Lipson, and A. L. Gaeta, "Quantum random number generator using a microresonator-based Kerr oscillator," *Opt. Lett.* **41**, 4194 (2016).
5. M. Yu, Y. Okawachi, A. G. Griffith, M. Lipson, and A. L. Gaeta, "Modelocked mid-infrared frequency combs in a silicon microresonator," *Optica* **3**, 854 (2016).
6. V. Venkataraman, K. Saha, and A. L. Gaeta, "Phase modulation at the few-photon level for weak-nonlinearity-based quantum computing," *Nature Phot.* **7**, 138 (2013).
7. M. Fridman, A. Farsi, Y. Okawachi, and A. L. Gaeta, "Demonstration of temporal cloaking," *Nature* **481**, 62 (2012).
8. M. A. Foster, R. Salem, D. F. Geraghty, A. C. Turner-Foster, M. Lipson, and A. L. Gaeta, "Silicon-chip-based ultrafast optical oscilloscope," *Nature* **456**, 81 (2008).
9. M. A. Foster, A. C. Turner, J. E. Sharping, B. S. Schmidt, M. Lipson, and A. L. Gaeta, "Broad-band optical parametric gain on a silicon photonic chip," *Nature* **441**, 960 (2006).

Invited, Keynote, Plenary, and Tutorial Lectures (> 300)

Selected Awards

Fellow of the American Physical Society.
Fellow of the Optical Society of America.

Selected Conference Organization

General Chair, Nonlinear Photonics Topical Meeting, July, 2016, Sydney.
General Chair, Nonlinear Optics Topical Meeting, August 2009, Hawaii.
General Chair, 2007 Quantum Electronics and Laser Science Conference, Baltimore.
Chair, Frontiers in Optics 2003: Annual Meeting of the Optical Society of America, Tucson, AZ.