Georgios Veronis

Division of Electrical & Computer Engineering,
School of Electrical Engineering & Computer Science
and
Center for Computation & Technology
Louisiana State University
Baton Rouge, LA 70803
Phone: (225) 334-2459 Fax: (225) 578-5200
Email: gveronis@lsu.edu Web: **www.ece.lsu.edu/gveronis/**

Education

Ph.D.	Electrical Engineering	Stanford University, Stanford, California	2002
M.S.	Electrical Engineering	Stanford University, Stanford, California	1999
Diploma	Elec. and Comp. Eng.	Nat. Technical University of Athens, Greece	1997

Research Interests

Theory and simulation of photonic materials, nanoscale photonic devices, plasmonics, computational electromagnetics.

Professional Experience

- Associate Professor, Division of Electrical & Computer Engineering, School of Electrical Engineering & Computer Science and Center for Computation & Technology (CCT), Louisiana State University, January 2014 – present.
- Assistant Professor, Division of Electrical & Computer Engineering, School of Electrical Engineering & Computer Science and Center for Computation & Technology (CCT), Louisiana State University, January 2008 – December 2013.
- Engineering Research Associate, Stanford University, June 2003 – December 2007. Worked with Professor Shanhui Fan.
- Postdoctoral Fellow, Stanford University, July 2002 – May 2003.
- Research Assistant, Stanford University, September 1997 – June 2002. Worked with Professor Umran Inan.
- Teaching Assistant, Stanford University, April 2000 – June 2000 and September 2000 – December 2000.

Honors and Awards

- Rubicon Professorship of Engineering, College of Engineering, Louisiana State University, 1/2014-present.
- National Science Foundation Career Award, 2013.
- Charles P. Siess, Jr. Professorship for career development, College of Engineering, Louisiana State University, 1/2012-12/2014.
- Silver medal awarded by the Dean of National Technical University of Athens for ranking 2nd in class, 1997.
- Technical Chamber of Greece Award, 1995, 1996, 1997.
- Greek State Scholarships Foundation (I.K.Y.) Award, 1993, 1994, 1995, 1996.
- N. Kritikos Award: Awarded for excellence in all undergraduate mathematics courses, 1993.

Grants and Contracts

1. J. Moreno, J. Allison, *REU Site: Interdisciplinary Research Experience in Computational Sciences*, NSF Research Experiences for Undergraduates (REU), $346,641. 5/2016-4/2019 (Role: Senior Investigator)
2. G. Veronis, *Graphene-based energy harvesting devices*, Chevron Innovative Research Support Fund, College of Engineering, Louisiana State University, $32,078. 8/2015-7/2016 (Role: PI)
3. T. Monroe, D. Hayes, L. Haber, R. Lipton, G. Veronis, *Integrated FRG: Nanoplasmonic Materials for Gene and Drug Delivery*, Faculty Research Grant, Louisiana State University, $30,000. 7/2014-8/2015 (Role: Co-PI)
4. G. Veronis, *Design of nanophotonic structures for thermophotovoltaics*, Pilot Funding for New Research (Pfund) program, NSF EPSCoR, Louisiana Board of Regents, $10,000. 1/2014-9/2015 (Role: PI)
5. G. Veronis, *Enhancing the efficiency of solar cells with metallic nanostructures*, Economic Development Assistantships, Louisiana State University, $100,000. 1/2014-12/2018 (Role: PI)
6. J. Moreno, M. Tyagi, *REU Site: Interdisciplinary Research Experience in Computational Sciences*, NSF Research Experiences for Undergraduates (REU), $324,972. 5/2013-4/2016 (Role: Participant)
7. G. Veronis, *CAREER: Physics-based modeling techniques to enable high-performance nanoplasmonic devices*, NSF CAREER program, $400,000. 4/2013-3/2019 (Role: PI)
8. G. Veronis, *Analysis of the effect of fabrication-related disorders and yield optimization of nanoplasmonic devices*, Research Initiation Grant, Southeastern Center for Electrical Engineering Education, $19,000. 7/2012-12/2013 (Role: PI)
9. G. Veronis, *Enhancing the efficiency of photovoltaic solar cells through coupling to slow light modes*, Fund for Innovation in Engineering Research, College of Engineering, Louisiana State University, $33,333. 4/2012-6/2015 (Role: PI)
10. G. Veronis, *Slow-light enhanced nanoscale plasmonic devices*, Pilot Funding for New Research (Pfund) program, NSF EPSCoR, Louisiana Board of Regents, $10,000. 3/2012-12/2013 (Role: PI)
11. G. Veronis, *Plasmonic devices for controlling light at the nanoscale*, NSF Electronics, Photonics, and Magnetic Devices (EPMD), $240,000. 6/2011-5/2016 (Role: PI)
12. G. Veronis, *Efficiency enhancement in thin-film photovoltaic solar cells using metallic nanowires*, Faculty Research Grant, Louisiana State University, $10,000. 7/2010-6/2011 (Role: PI)
13. J. Moreno, G. Allen, *REU Site: Interdisciplinary Research Experience in Computational Sciences*, NSF Research Experiences for Undergraduates (REU), $253,518. 5/2010-4/2013 (Role: Participant)
14. G. Veronis, *Slow-light subwavelength periodic plasmonic waveguides*, Pilot Funding for New Research (Pfund) program, NSF EPSCoR, Louisiana Board of Regents, $10,000. 1/2010-2/2011 (Role: PI)
15. G. Veronis, *Nanoscale plasmonic devices for enhancement of nonlinear optical effects and sensing*, Research Competitiveness Subprogram, Louisiana Board of Regents, $118,423. 7/2009-6/2014 (Role: PI)
16. G. Veronis, *Analysis of the effect of fabrication disorders in nanoscale plasmonic waveguides*, Summer Stipend Program, Louisiana State University, $5,000. 7/2009 (Role: PI)
17. G. Veronis, *Nanoscale plasmonic devices for broadband enhancement of nonlinear optical effects*, Faculty Research Grant, Louisiana State University, $10,000. 7/2008-6/2009 (Role: PI)

Citations

Total citations in **Google Scholar** as of May 30, 2018: 4421. h-index: 29.

Publications

Most available at www.ece.lsu.edu/gveronis/

(indicates a graduate student, ** an undergraduate student, and # a post-doctoral fellow supervised by Dr. Veronis)*

Patents

1. U. S. Inan and G. Veronis, "Plasma display panel with improved cell geometry," U.S. Patent 7,288,892 (Issued on October 30, 2007).

Book Chapters

1. Y. Huang, C. Min, and G. Veronis, "Compact slow-light enhanced plasmonic waveguide refractive index sensors," in *Reviews in Plasmonics 2016,* C. D. Geddes (Ed.), Chapter 5, pp. 77-108, Springer, 2017.
2. A. Mahigir[*], P. Dastmalchi[*], G. Veronis, W. Shin, P. B. Catrysse, M. L. Brongersma, S. Fan, and W. Cai, "Subwavelength plasmonic two-conductor waveguides," in *Wiley Encyclopedia of Electrical and Electronics Engineering*, J. Webster (Ed.), John Wiley & Sons, 2016.
3. G. Veronis, C. Min[#], Y. Huang[*], and L. Yang[*], "Nanophotonic resonators for enhancement of absorption and transmission cross sections of subwavelength plasmonic devices," in *Integrated Nanophotonic Resonators: Fundamentals, Devices, and Applications,* Y. Yi (Ed.), Chapter 4, pp. 93-126, Pan Stanford Publishing, 2015.
4. P. Dastmalchi[*], A. Haddadpour[*], and G. Veronis, "Nanophotonics: devices for manipulating light at the nanoscale," in *Nanolithography: The art of fabricating nanoelectronic and nanophotonic devices*, M. Feldman (Ed.), Woodhead Publishing Series in Electronic and Optical Materials, no. 42, Chapter 11, pp. 376-398, Woodhead Publishing, 2013.
5. G. Veronis, "Finite-difference frequency-domain technique," in *Encyclopedia of Nanotechnology*, B. Bhushan (Ed.), pp. 843-852, Springer, 2012.
6. G. Veronis, and S. Fan, "Plasmonic slot waveguides," in *Plasmonic Nanoguides and Circuits,* S. I. Bozhevolnyi (Ed.), Chapter 6, pp. 159-188, World Scientific, 2009.
7. G. Veronis, and S. Fan, "Overview of simulation techniques for plasmonic devices," in *Surface Plasmon Nanophotonics*, M.L. Brongersma and P.G. Kik (Eds.), Springer Series in Optical Sciences, vol. 131, Chapter 12, pp. 169-182, Springer, 2007.

Refereed Journal Publications

1. Y. Huang, Y. Shen, C. Min, and G. Veronis, "Switching photonic nanostructures between cloaking and superscattering regimes using phase-change materials," *Optical Materials Express*, vol. 8, no. 6, pp. 1672-1685, June 2018 *(invited paper)*.
2. S. G. Lorenzo[**], C. You[*], C. H. Granier[*], G. Veronis, and J. P. Dowling, "Optimized mid-infrared thermal emitters for applications in aircraft countermeasures," *AIP Advances,* vol. 7, art. no. 125112, December 2017.
3. A. Mahigir[*], T.-W. Chang, A. Behnam, G. L. Liu, M. R. Gartia, and G. Veronis, "Plasmonic nanohole array for enhancing the SERS signal of a single layer of graphene in water," *Scientific Reports,* vol. 7, art. no. 14044, October 2017.
4. Y. Huang, Y. Shen, C. Min, and G. Veronis, "Switching of the direction of reflectionless light propagation at exceptional points in non-PT-symmetric structures using phase-change materials," *Optics Express,* vol. 25, no. 22, pp. 27283-27297, October 2017.
5. C. H. Granier[*], S. G. Lorenzo[**], C. You[*], G. Veronis, and J. P. Dowling, "Optimized aperiodic broadband visible absorbers," *Journal of Optics,* vol. 19, art. no. 105003, October 2017.
6. Y. Huang, Y. Shen, C. Min, S. Fan, and G. Veronis, "Unidirectional reflectionless light propagation at exceptional points," *Nanophotonics*, vol. 6, no. 5, pp. 977–996, September 2017.
7. T.-W. Chang, X. Wang, A. Mahigir[*], G. Veronis, G. L. Liu, and M. R. Gartia, "Marangoni convection assisted single molecule detection with nanojet surface enhanced Raman spectroscopy," *ACS Sensors*, vol. 2, no. 8, pp. 1133-1138, August 2017.
8. T. Hughes, G. Veronis, K. P. Wootton, R. J. England, and S. Fan, "Method for computationally efficient design of dielectric laser accelerator structures," *Optics Express*, vol. 25, no. 13, pp. 15414-15427, June 2017.
9. M. Duocastella, F. Tantussi, A. Haddadpour[*], R. Proietti Zaccaria, A. Jacassi, G. Veronis, A. Diaspro, and F. De Angelis, "Combination of scanning probe technology with photonic nanojets," *Scientific Reports*, vol. 7, art. no. 3474, June 2017.
10. P. Dastmalchi[*] and G. Veronis, "Plasmonic switches based on subwavelength cavity resonators," *Journal of the Optical Society of America B*, vol. 33, no. 12, pp. 2486–2492, December 2016.
11. V. Foroughi Nezhad[*], A. Haddadpour[*], and G. Veronis, "Tunable spatial mode converters and optical diodes for graphene parallel plate waveguides," *Optics Express*, vol. 24, no. 21, pp. 23883-23897, October 2016.
12. Y. Huang, C. Min, and G. Veronis, "Broadband near total light absorption in non-*PT*-symmetric waveguide-cavity systems," *Optics Express*, vol. 24, no. 19, pp. 22219-22231, September 2016.

13. A. Haddadpour[*], V. Foroughi Nezhad[*], Z. Yu, and G. Veronis, "Highly compact magneto-optical switches for metal-dielectric-metal plasmonic waveguides," *Optics Letters*, vol. 41, no. 18, pp. 4340-4343, September 2016.
14. H. Wang, A. Toma, H.-Y. Wang, A. Bozzola, E. Miele, A. Haddadpour[*], G. Veronis, F. De Angelis, L. Wang, Q.-D. Chen, H.-L. Xu, H.-B. Sun, and R. Proietti Zaccaria, "The role of Rabi splitting tuning in the dynamics of strongly coupled J-aggregates and surface plasmon polaritons in nanohole arrays," *Nanoscale*, vol. 8, no. 27, pp. 13445-13453, July 2016.
15. Y. Huang, C. Min, S. Tao, and G. Veronis, "Design of compact Mach-Zehnder interferometer-based slow-light-enhanced plasmonic waveguide sensors," *Journal of Lightwave Technology*, vol. 34, no. 11, pp. 2796-2803, June 2016.
16. Y. Huang, G. Veronis, and C. Min, "Unidirectional reflectionless propagation in plasmonic waveguide-cavity systems at exceptional points," *Optics Express*, vol. 23, no. 23, pp. 29882-29895, November 2015.
17. A. Mahigir[*], P. Dastmalchi[*], W. Shin, S. Fan, and G. Veronis, "Plasmonic coaxial waveguide-cavity devices," *Optics Express*, vol. 23, no. 16, pp. 20549-20562, August 2015.
18. Y. Huang, C. Min, P. Dastmalchi[*], and G. Veronis, "Slow-light enhanced subwavelength plasmonic waveguide refractive index sensors," *Optics Express*, vol. 23, no. 11, pp. 14922-14936, June 2015.
19. A. Haddadpour[*] and G. Veronis, "Microcavity enhanced directional transmission through a subwavelength plasmonic slit," *Optics Express*, vol. 23, no. 5, pp. 5789-5799, March 2015.
20. C. H. Granier[*], F. O. Afzal[**], S. G. Lorenzo[**], M. Reyes Jr.[**], J. P. Dowling, and G. Veronis, "Optimized aperiodic multilayer structures for use as narrow-angular absorbers," *Journal of Applied Physics*, vol. 116, no. 24, art. no. 243101, December 2014.
21. C. H. Granier[*], F. O. Afzal[**], C. Min[#], J. P. Dowling, and G. Veronis, "Optimized aperiodic highly directional narrowband infrared emitters," *Journal of the Optical Society of America B*, vol. 31, no. 6, pp. 1316-1321, June 2014.
22. P. Dastmalchi[*] and G. Veronis, "Efficient design of nanoplasmonic waveguide devices using the space mapping algorithm," *Optics Express*, vol. 21, no. 26, pp. 32160-32175, December 2013.
23. W. Shin, W. Cai, P. B. Catrysse, G. Veronis, M. L. Brongersma, and S. Fan, "Broadband sharp 90-degree bends and t-splitters in plasmonic coaxial waveguides," *Nano Letters*, vol. 13, no. 10, pp. 4753–4758, October 2013.
24. Y. Huang[*], C. Min[#], and G. Veronis, "Compact slit-based couplers for metal-dielectric-metal plasmonic waveguides," *Optics Express*, vol. 20, no. 20, pp. 22233-22244, September 2012.
25. Y. Huang[*], C. Min[#], L. Yang[*], and G. Veronis, "Nanoscale plasmonic devices based on metal-dielectric-metal stub resonators," *International Journal of Optics*, vol. 2012, art. no. 372048, September 2012.
26. C. Min[#], L. Yang[*], and G. Veronis, "Microcavity enhanced optical absorption in subwavelength slits," *Optics Express*, vol. 19, no. 27, pp. 26850-26858, December 2011.
27. Y. Huang[*], C. Min[#], and G. Veronis, "Subwavelength slow-light waveguides based on a plasmonic analogue of electromagnetically induced transparency," *Applied Physics Letters*, vol. 99, no. 14, art. no. 143117, October 2011.
28. L. Yang[*], C. Min[#], and G. Veronis, "Guided subwavelength slow-light mode supported by a plasmonic waveguide system," *Optics Letters*, vol. 35, no. 24, pp. 4184-4186, December 2010.
29. C. Min[#], and G. Veronis, "Theoretical investigation of fabrication-related disorders on the properties of subwavelength metal-dielectric-metal plasmonic waveguides," *Optics Express*, vol. 18, no. 20, pp. 20939-20948, September 2010.
30. C. Min[#], J. Li[**], G. Veronis, J. –Y. Lee, S. Fan, and P. Peumans, "Enhancement of optical absorption in thin-film organic solar cells through the excitation of plasmonic modes in metallic gratings," *Applied Physics Letters*, vol. 96, no.13, art. no. 133302, March 2010.
31. T.-W. Lee, S. D. Huver, H. Lee, L. Kaplan, S. B. McCracken, C. Min[#], D. B. Uskov, C. F. Wildfeuer, G. Veronis, and J. P. Dowling, "Optimization of quantum interferometric metrological sensors in the presence of photon loss," *Physical Review A*, vol. 80, no. 6, art. no. 063803, December 2009.
32. G. Veronis, S. E. Kocabas, D. A. B. Miller, and S. Fan, "Modeling of plasmonic waveguide components and networks," *Journal of Computational and Theoretical Nanoscience*, vol. 6, no. 8, pp. 1808-1826, August 2009 *(invited paper)*.
33. Z. Ruan, G. Veronis, K. L. Vodopyanov, M. M. Fejer, and S. Fan, "Enhancement of optics-to-THz conversion efficiency by metallic slot waveguides," *Optics Express*, vol. 17, no. 16, pp. 13502-13515, August 2009.

34. C. Min[#], and G. Veronis, "Absorption switches in metal-dielectric-metal plasmonic waveguides," *Optics Express*, vol. 17, no. 13, pp. 10757-10766, June 2009.
35. G. Veronis, Z. Yu, S. E. Kocabas, D. A. B. Miller, M. L. Brongersma, and S. Fan, "Metal-dielectric-metal plasmonic waveguide devices for manipulating light at the nanoscale," *Chinese Optics Letters*, vol. 7, no. 4, pp. 302-308, April 2009 *(invited paper)*.
36. J. S. White, G. Veronis, Z. Yu, E. S. Barnard, A. Chandran, S. Fan, and M. L. Brongersma, "Extraordinary optical absorption through subwavelength slits," *Optics Letters*, vol. 34, no. 5, pp. 686-688, March 2009.
37. S. E. Kocabas, G. Veronis, D. A. B. Miller, and S. Fan, "Modal analysis and coupling in metal-insulator-metal waveguides," *Physical Review B*, vol. 79, no. 3, art. no. 035120, January 2009.
38. S. E. Kocabas, G. Veronis, D. A. B. Miller, and S. Fan, "Transmission line and equivalent circuit models for plasmonic waveguide components," *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 14, no. 6, pp. 1462-1472, November-December 2008.
39. W. T. Lau, J. –T. Shen, G. Veronis, S. Fan, and P. V. Braun, "Tuning coherent radiative thermal conductance in multilayer photonic crystals," *Applied Physics Letters*, vol. 92, no. 10, art. no. 103106, March 2008.
40. G. Veronis, and S. Fan, "Crosstalk between three-dimensional plasmonic slot waveguides," *Optics Express*, vol. 16, no. 3, pp. 2129-2140, February 2008.
41. Z. Yu, G. Veronis, S. Fan, and M. L. Brongersma, "Gain-induced switching in metal-dielectric-metal plasmonic waveguides," *Applied Physics Letters*, vol. 92, no. 4, art. no. 041117, January 2008.
42. Z. Yu, G. Veronis, Z. Wang, and S. Fan, "One-way electromagnetic waveguide formed at the interface between a plasmonic metal under a static magnetic field and a photonic crystal," *Physical Review Letters*, vol. 100, no. 2, art. no. 023902, January 2008.
43. G. Veronis, and S. Fan, "Modes of subwavelength plasmonic slot waveguides," *Journal of Lightwave Technology*, vol. 25, no. 9, pp. 2511-2521, September 2007 *(invited paper)*.
44. W. T. Lau, J. –T. Shen, G. Veronis, and S. Fan, "Spatial coherence of the thermal electromagnetic field in the vicinity of a dielectric slab," *Physical Review E*, vol. 76, no. 1, art. no. 016601, July 2007.
45. G. Veronis, and S. Fan, "Theoretical investigation of compact couplers between dielectric slab waveguides and two-dimensional metal-dielectric-metal plasmonic waveguides," *Optics Express*, vol. 15, no. 3, pp. 1211-1221, February 2007.
46. P. B. Catrysse, J. –T. Shen, G. Veronis, H. Shin, and S. Fan, "Metallic metamaterials with a high index of refraction," *Optics & Photonics News*, vol. 17, no. 12, p. 34, December 2006.
47. Z. Yu, G. Veronis, M. L. Brongersma, and S. Fan, "Design of mid-infrared photodetectors enhanced by surface plasmons on grating structures," *Applied Physics Letters*, vol. 89, no. 15, art. no. 151116, October 2006. Also highlighted in *Nature Photonics*, 2006.27, October 2006.
48. G. D. Moss, V. P. Pasko, N. Liu, and G. Veronis, "Monte Carlo model for analysis of thermal runaway electrons in streamer tips in transient luminous events and streamer zones of lightning leaders," *Journal of Geophysical Research (Space Physics)*, vol. 111, no. A2, art. no. A02307, February 2006.
49. P. B. Catrysse, G. Veronis, H. Shin, J. –T. Shen, and S. Fan, "Guided modes supported by plasmonic films with a periodic arrangement of sub-wavelength slits," *Applied Physics Letters*, vol. 88, no. 3, art. no. 031101, January 2006.
50. G. Veronis, and S. Fan, "Guided subwavelength plasmonic mode supported by a slot in a thin metal film," *Optics Letters*, vol. 30, no. 24, pp. 3359-3361, December 2005.
51. G. Veronis, and S. Fan, "Bends and splitters in subwavelength metal-dielectric-metal plasmonic waveguides," *Applied Physics Letters*, vol. 87, no. 13, art. no. 131102, September 2005.
52. G. Veronis, R. W. Dutton, and S. Fan, "Metallic photonic crystals with strong broadband absorption at optical frequencies over wide angular range," *Journal of Applied Physics*, vol. 97, no. 9, art. no. 093104, May 2005.
53. G. Veronis, and U. S. Inan, "Simulation of self-erase discharge waveforms in plasma display panels," *IEEE Transactions on Plasma Science*, vol. 33, no. 2, pp. 516-517, April 2005.
54. G. Veronis, and U. S. Inan, "Improvement of the efficiency of plasma display panels by combining waveform and cell geometry design," *IEEE Transactions on Plasma Science*, vol. 33, no. 1, pp. 147-156, February 2005.
55. G. Veronis, W. Suh, Y. Liu, M. Han, Z. Wang, R. W. Dutton, and S. Fan, "Coupled optical and electronic simulations of electrically pumped photonic-crystal-based light emitting diodes," *Journal of Applied Physics*, vol. 97, no. 4, art. no. 044503, February 2005.
56. G. Veronis, R. W. Dutton, and S. Fan, "Method for sensitivity analysis of photonic crystal devices," *Optics Letters*, vol. 29, no. 19, pp. 2288-2290, October 2004.

57. G. Veronis, and U. S. Inan, "Cell geometry designs for efficient plasma display panels," *Journal of Applied Physics*, vol. 92, no. 9, pp. 4897-4905, November 2002.
58. G. Veronis, and U. S. Inan, "Simulation studies of the coplanar-electrode and other plasma display panel cell designs," *Journal of Applied Physics*, vol. 91, no. 12, pp. 9502-9512, June 2002.
59. G. Veronis, U. S. Inan, and V. P. Pasko, "He-Xe microdischarges: Comparison of simulation results with experimental data," *Applied Physics Letters*, vol. 78, no. 1, pp. 25-27, January 2001.
60. G. Veronis, U. S. Inan, and V. P. Pasko, "Fundamental properties of inert gas mixtures for plasma display panels," *IEEE Transactions on Plasma Science*, vol. 28, no. 4, pp. 1271-1279, August 2000.
61. J. L. Tsalamengas, and G. Veronis, "Radiation and receiving characteristics of parallel plate-fed slot antennas loaded by a dielectric cylinder: TM-case," *Journal of Electromagnetic Waves and Applications*, vol. 13, no. 7, pp. 923-941, July 1999.
62. J. L. Tsalamengas, and G. Veronis, "Radiation and receiving characteristics of parallel plate-fed slot antennas loaded by a dielectric cylinder: TE-case," *Journal of Electromagnetic Waves and Applications*, vol. 13, no. 7, pp. 903-922, July 1999.
63. G. Veronis, V. P. Pasko, and U. S. Inan, "Characteristics of mesospheric optical emissions produced by lightning discharges," *Journal of Geophysical Research (Space Physics)*, vol. 104, no. A6, pp. 12645-12656, June 1999.

Refereed Conference Papers

1. C. T. Matyas[**], C. You[*], J. P. Dowling, and G. Veronis, "Method for simultaneous optimization of the material composition and dimensions of multilayer photonic nanostructures," *SPIE Optics + Photonics 2018*, August 19-23 2018, San Diego, CA, *to appear in Proceedings of the SPIE*, 2018.
2. G. Veronis, Y. Huang, Y. Shen, and C. Min, "Using phase-change materials to switch the direction of reflectionless light propagation in non-PT-symmetric structures," *SPIE Optics + Photonics 2018*, August 19-23 2018, San Diego, CA, *to appear in Proceedings of the SPIE*, 2018 *(invited paper)*.
3. A. Mahigir[*], and G. Veronis, "Highly compact structure for near-total absorption in a graphene monolayer in the visible," *Conference on Lasers and Electro-Optics, CLEO: 2018*, May 13-18 2018, San Jose, CA, paper JTh2A.55, 2018.
4. C. You[*], C. T. Matyas[**], Y. Huang, J. P. Dowling, and G. Veronis, "Broadband unidirectional reflectionless aperiodic multilayer structure," *Frontiers in Optics 2017/Laser Science XXXIII*, September 17-21 2017, Washington, D.C., paper JW3A.85, 2017.
5. N. Mehta, A. Mahigir[*], G. Veronis, and M. R. Gartia, "Orientational imaging of single plasmonic nanoparticle using dark-field hyperspectral imaging," *SPIE Optics + Photonics 2017*, August 6-10 2017, San Diego, CA, *Proceedings of the SPIE*, 10346, 1034631, 2017.
6. G. Veronis, Y. Huang, and C. Min, "Non-*PT*-symmetric plasmonic waveguide-cavity systems: unidirectional reflectionlessness and broadband near total light absorption," *SPIE Optics + Photonics 2017*, August 6-10 2017, San Diego, CA, *Proceedings of the SPIE*, 10345, 103451Z, 2017 *(invited paper)*.
7. A. Mahigir[*], P. Dastmalchi[*], W. Shin, S. Fan, and G. Veronis, "Plasmonic coaxial waveguides: cavity-based devices and slit-based couplers," *OSA Advanced Photonics 2017 Congress*, July 24-27 2017, New Orleans, LA, paper IM2A.3, 2017.
8. F. Tantussi, M. Duocastella, A. Haddadpour[*], R. Proietti Zaccaria, A. Jacassi, G. Veronis, A. Diaspro, and F. De Angelis, "Microsphere embedded in cantilever opens the AFM to high resolution optical microscopy," *2017 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC)*, June 25-29 2017, Munich, Germany, paper JSII-1.3, 2017.
9. S. Sharifi[*], Y. M. Banadaki, C. You[*], S. Lorenzo[**], G. Veronis, and J. P. Dowling, "Aperiodic multilayer graphene based tunable and switchable thermal emitter at mid-infrared frequencies," *231st ECS Meeting*, May 28-June 1 2017, New Orleans, LA, paper H03-1367, 2017.
10. V. Foroughi Nezhad[*] and G. Veronis, "Magneto-optical isolator for nanoplasmonic waveguides," *Conference on Lasers and Electro-Optics, CLEO: 2017*, May 14-19 2017, San Jose, CA, paper FM4H.6, 2017.
11. A. Mahigir[*], M. R. Gartia, T.-W. Chang, G. L. Liu, and G. Veronis, "Intensified surface enhanced Raman signal of a graphene monolayer on a plasmonic substrate through the use of fluidic dielectrics," *SPIE Photonics West 2017*, January 28-February 2 2017, San Francisco, CA, *Proceedings of the SPIE*, 10080, 1008005, 2017.

12. S. G. Lorenzo[**], C. You[*], G. Veronis, and J. P. Dowling, "Optimized mid-infrared thermal emitters for applications in aircraft countermeasures," *Frontiers in Optics 2016/Laser Science XXXII*, October 17-21 2016, Rochester, NY, paper JW4A.163, 2016.
13. P. Dastmalchi[*], A. Mahigir[*], and G. Veronis, "Analytical method for the sensitivity analysis of active nanophotonic devices," *SPIE Optics + Photonics 2016*, August 28-September 1 2016, San Diego, CA, *Proceedings of the SPIE*, 9920, 992024, 2016.
14. G. Veronis, Y. Huang, A. Mahigir[*], P. Dastmalchi[*], W. Shin, C. Min, and S. Fan, "Unidirectional reflectionless propagation and slow-light enhanced sensing with plasmonic waveguide-cavity systems," *SPIE Optics + Photonics 2016*, August 28-September 1 2016, San Diego, CA, *Proceedings of the SPIE*, 9920, 99201Y, 2016 *(invited paper)*.
15. V. Foroughi Nezhad[*], A. Haddadpour[*], and G. Veronis, "Tunable graphene-based mode converters and optical diodes," *Conference on Lasers and Electro-Optics, CLEO: 2016*, June 5-10 2016, San Jose, CA, paper JW2A.100, 2016.
16. Y. Huang, G. Veronis, and C. Min, "Unidirectional reflectionless propagation in plasmonic waveguide-cavity devices," *SPIE Photonics West 2016*, February 13-18 2016, San Francisco, CA, *Proceedings of the SPIE*, 9750, 97500G, 2016.
17. G. Veronis, C. H. Granier[*], I. Zand[*], A. Haddadpour[*], F. O. Afzal[**], S. G. Lorenzo[**], and J. P. Dowling, "Multiwavelength resonant absorption enhancement and highly directional absorption with aperiodic multilayer structures," *Optical Nanostructures and Advanced Materials for Photovoltaics (PV) 2015*, November 2-5 2015, Suzhou, China, paper PM4B.1, 2015 *(invited paper)*.
18. A. Haddadpour[*], V. Foroughi Nezhad[*], Z. Yu, and G. Veronis, "Magneto-optical switches in metal-dielectric-metal plasmonic waveguides," *SPIE Optics + Photonics 2015*, August 9-13 2015, San Diego, CA, *Proceedings of the SPIE*, 9546, 95461S, 2015.
19. C. H. Granier[*], S. G. Lorenzo[**], J. P. Dowling, and G. Veronis, "Wideband and wide angle thermal emitters for use as lightbulb filaments," *SPIE Optics + Photonics 2015*, August 9-13 2015, San Diego, CA, *Proceedings of the SPIE*, 9546, 954603, 2015.
20. I. Zand[*], A. Haddadpour[*], C. H. Granier[*], J. P. Dowling, and G. Veronis, "Near total resonant light absorption in a graphene monolayer at multiple tunable wavelengths with aperiodic multilayer structures," *Conference on Lasers and Electro-Optics, CLEO: 2015*, May 10-15 2015, San Jose, CA, paper JTu5A.81, 2015.
21. A. Mahigir[*], P. Dastmalchi[*], W. Shin, S. Fan, and G. Veronis, "Nanoscale devices based on plasmonic coaxial waveguide resonators," *SPIE Photonics West 2015*, February 7-12 2015, San Francisco, CA, *Proceedings of the SPIE*, 9365, 936511, 2015.
22. A. Haddadpour[*] and G. Veronis, "Enhanced directional transmission through a subwavelength plasmonic slit by optical microcavities," *Frontiers in Optics 2014/Laser Science XXX*, October 19-23 2014, Tucson, AZ, paper FTh3D.3, 2014.
23. C. H. Granier[*], F. O. Afzal[**], C. Min[#], J. P. Dowling, and G. Veronis, "Optimized aperiodic highly directional narrowband infrared emitters," *SPIE Optics + Photonics 2014*, August 17-21 2014, San Diego, CA, *Proceedings of the SPIE*, 9162, 91621G, 2014.
24. P. Dastmalchi[*] and G. Veronis, "Compact multisection cavity switches in metal-dielectric-metal plasmonic waveguides," *Conference on Lasers and Electro-Optics, CLEO: 2014*, June 8-13 2014, San Jose, CA, paper FTu3K.7, 2014.
25. Y. Huang[*], P. Dastmalchi[*] and G. Veronis, "Slow-light enhanced nanoscale plasmonic waveguide sensors and switches," *SPIE Photonics West 2014*, February 1-6 2014, San Francisco, CA, *Proceedings of the SPIE*, 8988, 89880V, 2014.
26. P. Dastmalchi[*] and G. Veronis, "Efficient design of nanoscale metal-dielectric-metal plasmonic waveguide devices," *Frontiers in Optics 2013/Laser Science XXIX*, October 6-10 2013, Orlando, FL, paper FW1E.4, 2013.
27. C. H. Granier[*], F. O. Afzal[**], G. Veronis, and J. P. Dowling, "Multilayer structures with highly directional absorptivity for solar thermophotovoltaics," *SPIE Optics + Photonics 2013*, August 25-29 2013, San Diego, CA, *Proceedings of the SPIE*, 8824, 88240M, 2013.
28. W. Shin, W. Cai, P. B. Catrysse, G. Veronis, M. L. Brongersma, and S. Fan, "Plasmonic nano-coaxial waveguides for 90-degree bends and T-splitters," *Conference on Lasers and Electro-Optics, CLEO: 2013*, June 9-14 2013, San Jose, CA, paper QW3N.5, 2013.

29. P. Dastmalchi[*] and G. Veronis, "Efficient optimization of nanoplasmonic devices using space mapping," *SPIE Photonics West 2013*, February 2-7 2013, San Francisco, CA, *Proceedings of the SPIE*, 8627, 862712, 2013.
30. G. Veronis, C. Min[#], C. H. Granier[*], and J. P. Dowling, "Enhancing the efficiency of photovoltaic solar cells with photonic nanostructures," *IEEE Photonics Conference 2012*, September 23-27 2012, Burlingame, CA, paper MW1, 2012 *(invited paper)*.
31. M. B. Kim, T.-W. Lee, G. Veronis, H. Lee, and J. P. Dowling, "Investigation for the macroscopic quantum electrodynamics to describe light in dielectric material," *43rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics*, June 4-8 2012, Orange County, CA, paper G6.00008, 2012.
32. Y. Huang[*], C. Min[#], and G. Veronis, "Efficient coupling to metal-dielectric-metal plasmonic waveguides with subwavelength slit structures," *Conference on Lasers and Electro-Optics, CLEO: 2012*, May 6-11 2012, San Jose, CA, paper JTh2A.113, 2012.
33. G. Veronis, "Compact photodetectors and couplers based on plasmonic nanocavities," *The 2012 Villa Conference on Advanced Optical Materials, Workshop G: Plasmonic Materials, The 2012 Energy Materials Nanotechnology (EMN) Meeting*, April 16-20 2012, Orlando, FL, 170, 2012 *(invited paper)*.
34. C. Min[#], Y. Huang[*], L. Yang[*], and G. Veronis, "Compact optical microcavity structures for enhancement of absorption and transmission cross sections of subwavelength plasmonic devices," *SPIE Photonics West 2012*, January 21-26 2012, San Francisco, CA, *Proceedings of the SPIE*, 8264, 826413, 2012.
35. C. Min[#], L. Yang[*], and G. Veronis, "Enhancement of light absorption in subwavelength plasmonic slits by optical microcavities," *Frontiers in Optics 2011/Laser Science XXVII*, October 16-20 2011, San Jose, CA, paper FWW4, 2011.
36. C. Min[#], and G. Veronis, "Active plasmonic devices enhanced by waveguide dispersion engineering," *SPIE Optics + Photonics 2011*, August 21-25 2011, San Diego, CA, *Proceedings of the SPIE*, 8095, 80951C, 2011.
37. C. Min[#], and G. Veronis, "Slow-light enhanced absorption switches in metal-dielectric-metal plasmonic waveguides," *Conference on Lasers and Electro-Optics, CLEO: 2011*, May 1-6 2011, Baltimore, MD, paper QThL6, 2011.
38. G. Veronis, "Plasmonic waveguide-cavity systems for manipulating light at the nanoscale," *The 2011 Villa Conference on Interactions among Nanostructures, VCIAN-2011*, April 21-25 2011, Las Vegas, NV, 109, 2011 *(invited paper)*.
39. Y. Huang[*], C. Min[#], and G. Veronis, "Plasmon-induced transparency in subwavelength metal-dielectric-metal waveguides," *SPIE Photonics West 2011*, January 22-27 2011, San Francisco, CA, *Proceedings of the SPIE*, 7941, 79410X, 2011.
40. L. Yang[*], Y. Huang[*], C. Min[#], and G. Veronis, "Slow-light subwavelength plasmonic waveguides based on plasmonic analogues of periodically-loaded transmission lines and electromagnetically induced transparency," *The 23rd Annual Meeting of the IEEE Photonics Society*, November 7-11 2010, Denver, CO, 395, 2010.
41. C. Min[#] and G. Veronis, "Investigation of the effect of fabrication-related disorders in subwavelength metal-dielectric-metal plasmonic waveguides," *SPIE Optics + Photonics 2010*, August 1-5 2010, San Diego, CA, *Proceedings of the SPIE*, 7757, 77573E, 2010.
42. C. Min[#] and G. Veronis, "All-optical nonlinear switches based on Y-shaped plasmonic waveguides," *SPIE Optics + Photonics 2010*, August 1-5 2010, San Diego, CA, *Proceedings of the SPIE*, 7756, 775612, 2010.
43. C. Min[#] and G. Veronis, "Theoretical investigation of fabrication-related disorders on the properties of subwavelength metal-dielectric-metal plasmonic waveguides," *Photonic Metamaterials and Plasmonics (META) 2010*, June 7-9 2010, Tucson, AZ, paper MMD2, 2010.
44. C. Min[#], J. Li[**], G. Veronis, J. Y. Lee, S. Fan, and P. Peumans, "Optical absorption enhancement in thin-film organic photovoltaic solar cells through the excitation of plasmonic modes in metallic gratings," *Optics for Solar Energy (SOLAR) 2010*, June 7-9 2010, Tucson, AZ, paper SWA2, 2010.
45. L. Yang[*], C. Min[#], and G. Veronis, "Guided subwavelength slow-light mode supported by a periodic plasmonic waveguide," *Conference on Lasers and Electro-Optics, CLEO/QELS 2010*, May 16-21 2010, San Jose, CA, paper JThE3, 2010.
46. L. Yang[*], C. Min[#], and G. Veronis, "Guided subwavelength optical mode with slow group velocity supported by a periodic plasmonic waveguide," *SPIE Photonics West 2010*, January 23-28 2010, San Francisco, CA, *Proceedings of the SPIE*, 7604, 760418, 2010.
47. Z. Ruan, G. Veronis, K. L. Vodopyanov, M. M. Fejer, and S. Fan, "Enhancement of optics-to-THz conversion efficiency by metallic slot waveguides," *SPIE Photonics West 2010*, January 23-28 2010, San Francisco, CA, *Proceedings of the SPIE*, 7582, 75820W, 2010.

48. C. Min[#], J. Li[**], G. Veronis, J. Y. Lee, S. Fan, and P. Peumans, "Enhancement of Optical Absorption Efficiency in Thin-film Organic Photovoltaic Solar Cells through the Excitation of Plasmonic Modes in Metallic Gratings," *2009 MRS Fall Meeting*, November 30-December 4 2009, Boston, MA, paper R3.8, 2009.
49. S. B. McCracken, T. W. Lee, S. D. Huver, L. Kaplan, H. Lee, C. Min[#], D. B. Uskov, C. F. Wildfeuer, G. Veronis, and J. P. Dowling, "Optimization of States in a Lossy Metrology," *Single Photon Workshop 2009*, November 3-6 2009, Boulder, CO, 98, 2009.
50. C. Min[#] and G. Veronis, "All-optical absorption switches in subwavelength metal-dielectric-metal plasmonic waveguides," *Frontiers in Optics 2009/Laser Science XXV*, October 11-15 2009, San Jose, CA, paper FThW5, 2009.
51. J. S. White, G. Veronis, Z. Yu, E. S. Barnard, A. Chandran, S. Fan, and M. L. Brongersma, "Extraordinary optical absorption through subwavelength slits," *SPIE Optics + Photonics 2009*, August 2-6 2009, San Diego, CA, paper 7395-42, 2009.
52. C. Min[#] and G. Veronis, "All-optical absorption switches in subwavelength metal-dielectric-metal plasmonic waveguides," *SPIE Optics + Photonics 2009*, August 2-6 2009, San Diego, CA, *Proceedings of the SPIE*, 7394, 73941Y, 2009.
53. S. B. McCracken, T. W. Lee, S. D. Huver, L. Kaplan, H. Lee, C. Min[#], D. B. Uskov, C. F. Wildfeuer, G. Veronis, and J. P. Dowling, "Optimization of States in a Lossy Interferometer," *40th Annual Meeting of the Division of Atomic, Molecular and Optical Physics*, May 19-23 2009, Charlottesville, VA, paper J1.00005, 2009.
54. J. S. White, G. Veronis, Z. Yu, E. S. Barnard, A. Chandran, S. Fan, and M. L. Brongersma, "Extraordinary optical absorption through plasmonic subwavelength slits," *2009 APS March Meeting*, March 16-20 2009, Pittsburgh, PA, paper B27.00008, 2009.
55. W. T. Lau, J. –T. Shen, G. Veronis, and S. Fan, "Ultra-small coherent thermal conductance using multi-layer photonic crystal," *SPIE Photonics West 2009*, January 24-29 2009, San Jose, CA, *Proceedings of the SPIE*, 7223, 722317, 2009.
56. G. Veronis, and S. Fan, "Large enhancement of second-harmonic generation in subwavelength metal-dielectric-metal plasmonic waveguides," *SPIE Photonics West 2009*, January 24-29 2009, San Jose, CA, *Proceedings of the SPIE*, 7218, 72180Y, 2009.
57. S. E. Kocabas, G. Veronis, D. A. B. Miller, and S. Fan, "Spectral analysis of scattering in metal-insulator-metal waveguides and related equivalent circuit models," *Frontiers in Optics, META 2008*, October 19-24 2008, Rochester, NY, paper MTuD5, 2008.
58. G. Veronis, Z. Yu, S. Fan, and M. L. Brongersma, "Gain-induced switching and enhancement of nonlinear effects in metal-dielectric-metal plasmonic waveguides," *Frontiers in Optics, META 2008*, October 19-24 2008, Rochester, NY, paper MTuD1, 2008.
59. G. Veronis, and S. Fan, "Properties of three-dimensional plasmonic slot waveguides," *SPIE Optics + Photonics 2008*, August 10-14 2008, San Diego, CA, *Proceedings of the SPIE*, 7032, 703216, 2008.
60. W. T. Lau, J. –T. Shen, G. Veronis, and S. Fan, "Tuning coherent radiative thermal conductance in multilayer photonic crystals," *Conference on Lasers and Electro-Optics, CLEO/QELS 2008*, May 4-9 2008, San Jose, CA, paper QFH2, 2008.
61. G. Veronis, and S. Fan, "Crosstalk between three-dimensional plasmonic slot waveguides," *Conference on Lasers and Electro-Optics, CLEO/QELS 2008*, May 4-9 2008, San Jose, CA, paper QWA4, 2008.
62. J. White, E. S. Barnard, G. Veronis, S. Fan, and M. L. Brongersma, "Near-field localization with surface plasmon resonant nano-apertures for efficient, high-speed photodetectors," *MRS 2008 Spring Meeting*, March 24-28 2008, San Francisco, CA, paper L5.4, 2008.
63. G. Veronis, Z. Yu, M. L. Brongersma, and S. Fan, "Subwavelength plasmonic devices for guiding and concentrating light," *15th International Conference on Computational and Experimental Engineering and Sciences*, March 16-22 2008, Honolulu, HI, 22, 2008 *(invited paper)*.
64. S. Fan, Z. Yu, G. Veronis, Z. Wang, and J. T. Shen, "One-way waveguide and high-index metamaterials," *15th International Conference on Computational and Experimental Engineering and Sciences*, March 16-22 2008, Honolulu, HI, 22, 2008 *(invited paper)*.
65. W. T. Lau, J. –T. Shen, G. Veronis, and S. Fan, "Spatial coherence of the thermal electromagnetic field in the vicinity of a dielectric slab," *SPIE Photonics West 2008*, January 19-24 2008, San Jose, CA, *Proceedings of the SPIE*, 6901, 690109, 2008.

66. Z. Yu, G. Veronis, M. L. Brongersma, and S. Fan, "Gain-induced switching in metal-dielectric-metal plasmonic waveguides," *SPIE Photonics West 2008*, January 19-24 2008, San Jose, CA, *Proceedings of the SPIE*, 6896, 68960L, 2008.
67. Z. Yu, G. Veronis, Z. Wang, and S. Fan, "One-way electromagnetic waveguide," *The 20th Annual Meeting of the Lasers and Electro-Optics Society, LEOS 2007*, October 21-25 2007, Lake Buena Vista, FL, 278, 2007.
68. J. White, Z. Yu, G. Veronis, S. Fan, and M. L. Brongersma, "Surface plasmon-enhanced photodetectors," *SPIE Optics + Photonics 2007*, August 26-30 2007, San Diego, CA, paper 6642-20, 2007.
69. S. Fan, J. T. Shen, Z. Yu, G. Veronis, and Z. Wang, "One-way waveguide and strong photon-photon interactions in nanophotonic structures," *IEEE/LEOS International Conference on Optical MEMS and Nanophotonics 2007*, August 12-16 2007, Hualien, Taiwan, 181, 2007 *(invited paper)*.
70. G. Veronis, W. Shin, and S. Fan, "Compact couplers between dielectric and metal-dielectric-metal plasmonic waveguides," *Conference on Lasers and Electro-Optics, CLEO/QELS 2007*, May 6-11 2007, Baltimore, MD, paper CWC2, 2007.
71. G. Veronis, and S. Fan, "Compact couplers between dielectric and plasmonic slot waveguides," *SPIE Photonics West 2007*, January 20-25 2007, San Jose, CA, *Proceedings of the SPIE*, 6475, 64750S, 2007.
72. Z. Yu, G. Veronis, M. L. Brongersma, and S. Fan, "Design of mid-infrared photodetectors enhanced by surface plasmons on grating structures," *SPIE Photonics West 2007*, January 20-25 2007, San Jose, CA, *Proceedings of the SPIE*, 6475, 64750Q, 2007.
73. G. Veronis, and S. Fan, "Subwavelength Plasmonic Waveguide Structures Based on Slots in Thin Metal Films," *Conference on Lasers and Electro-Optics, CLEO/QELS 2006*, May 21-26 2006, Long Beach, CA, paper JThC94, 2006.
74. G. Veronis, and S. Fan, "Frequency-domain modeling of photonic crystal and plasmonic devices," *The XV International Workshop on Optical Waveguide Theory and Numerical Modeling*, April 20-21 2006, Varese, Italy, 12, 2006 *(invited paper)*.
75. P. B. Catrysse, G. Veronis, H. Shin, J. –T. Shen, and S. Fan, "Plasmonic films with a periodic arrangement of subwavelength slits," *SPIE Photonics West 2006*, January 21-26 2006, San Jose, CA, *Proceedings of the SPIE*, 6128, 612818, 2006.
76. G. Veronis, and S. Fan, "Subwavelength plasmonic waveguide structures based on slots in thin metal films," *SPIE Photonics West 2006*, January 21-26 2006, San Jose, CA, *Proceedings of the SPIE*, 6123, 612308, 2006.
77. G. Veronis, and S. Fan, "Frequency domain modeling of nanophotonic devices," *SPIE International Symposium: Microelectronics, MEMS, and Nanotechnology*, December 11-15 2005, Brisbane, Australia, *Proceedings of the SPIE*, 6038, 60380X, 2006 *(invited paper)*.
78. S. Fan, H. Shin, M. L. Brongersma, G. Veronis, J. –T. Shen, and P. B. Catrysse, "Sub-wavelength resonances in metal-dielectric-metal plasmonic structures," *The 18th Annual Meeting of the Lasers and Electro-Optics Society, LEOS 2005*, October 23-27 2005, Sydney, Australia, 537, 2005 *(invited paper)*.
79. G. Veronis, Y. Liu, W. Suh, M. Han, Z. Wang, R. W. Dutton and S. Fan, "Coupled optical and electronic simulations of electrically pumped photonic-crystal-based LEDs," *SPIE Photonics West 2005*, January 22-27 2005, San Jose, CA, *Proceedings of the SPIE*, 5733, 422, 2005.
80. G. Veronis, R. W. Dutton and S. Fan, "A new method for sensitivity analysis of photonic crystal devices," *SPIE Photonics West 2005*, January 22-27 2005, San Jose, CA, *Proceedings of the SPIE*, 5733, 348, 2005.
81. G. D. Moss, V. P. Pasko, and G. Veronis, "Monte Carlo model for analysis of runaway electrons in streamer tips in sprites," *American Geophysical Union 2004 Fall Meeting*, December 13-17 2004, San Francisco, CA, AE31A - 0158, 2004.
82. G. Veronis, Y. -C. Lu, and R. W. Dutton, "Modeling of wave behavior of substrate noise coupling for mixed-signal IC design," *5th International Symposium on Quality Electronic Design (IEEE ISQED 2004)*, March 22-24 2004, San Jose, CA, 303, 2004.
83. G. Veronis, and U. S. Inan, "Cell geometry designs for efficient plasma display panels," *IEEE International Conference on Plasma Sciences*, May 26-30 2002, Banff, Alberta, Canada, IEEE Conference Record – Abstracts. The 29th IEEE International Conference on Plasma Science, 101, 2002.
84. G. Veronis, and U. S. Inan, "Improvement of the luminous efficiency of plasma display panels by numerical simulation," *IEEE International Conference on Pulsed Power and Plasma Sciences*, June 17-22 2001, Las Vegas, NV, IEEE Conference Record -Abstracts. Pulsed Power Plasma Science, 303, 2001.
85. G. Veronis, and U. S. Inan, "Optimization of the luminous efficiency of plasma display panels using numerical modeling," *Society for Information Display 2001 International Symposium*, June 5-7 2001, San Jose, CA, Digest of Technical Papers, 32, 770, 2001.

86. G. Veronis, U. S. Inan, and V. P. Pasko, "Comparison between simulation models and experimental results for a planar He-Xe microdischarge," *Gaseous Electronics Conference*, October 24-27 2000, Houston, TX, Bulletin of the American Physical Society, Vol. 45, No. 6, 70, 2000.
87. G. Veronis, U. S. Inan, and V. P. Pasko, "Fundamental properties of inert gas mixtures for plasma display panels," *IEEE International Conference on Plasma Science*, June 4-7 2000, New Orleans, LA, IEEE Conference Record -Abstracts. The 27th IEEE International Conference on Plasma Science, 128, 2000 *(invited paper)*.
88. G. Veronis, V. P. Pasko, and U. S. Inan, "Characteristics of mesospheric optical flashes (Elves) produced by lightning discharges," *American Geophysical Union 1998 Fall Meeting*, December 6-10 1998, San Francisco, CA, EOS, 79, N 45, F137, 1998.

Invited Talks

1. G. Veronis, Y. Huang, and C. Min, "Non-*PT*-symmetric plasmonic waveguide-cavity systems: unidirectional reflectionlessness and broadband near total light absorption," SPIE Optics + Photonics 2017, San Diego, CA, August 2017.
2. G. Veronis, Y. Huang, A. Mahigir, P. Dastmalchi, W. Shin, C. Min, and S. Fan, "Unidirectional reflectionless propagation and slow-light enhanced sensing with plasmonic waveguide-cavity systems," SPIE Optics + Photonics 2016, San Diego, CA, September 2016.
3. G. Veronis, C. H. Granier, I. Zand, A. Haddadpour, F. O. Afzal, S. G. Lorenzo, and J. P. Dowling, "Multiwavelength resonant absorption enhancement and highly directional absorption with aperiodic multilayer structures," Optical Nanostructures and Advanced Materials for Photovoltaics (PV) 2015, Suzhou, China, November 2015.
4. G. Veronis, "Plasmonic devices for controlling light at the nanoscale," Department of Physics Seminars, University of New Orleans, New Orleans, LA, October 2014.
5. G. Veronis, "Slow-light enhanced nanoscale plasmonic structures and devices," Louisiana EPSCoR Symposium, Baton Rouge, LA, August 2014.
6. G. Veronis, C. Min, C. H. Granier, and J. P. Dowling, "Enhancing the efficiency of photovoltaic solar cells with photonic nanostructures," IEEE Photonics Conference 2012, Burlingame, CA, September 2012.
7. G. Veronis, "Plasmonics for controlling light at the nanoscale: cavity and slow-light enhanced devices, and the effect of disorder," Workshop on Linear and Nonlinear Optical Interactions in Metamaterials and Plasmonic Nanostructures, Huntsville, AL, June 2012.
8. G. Veronis, "Compact photodetectors and couplers based on plasmonic nanocavities," The 2012 Energy Materials Nanotechnology (EMN) Meeting, Orlando, FL, April 2012.
9. G. Veronis, "Plasmonics for controlling light at the nanoscale: cavity and slow-light enhanced devices, and the effect of disorder," Computational Mathematics Seminar Series, Louisiana State University, Baton Rouge, LA, October 2011.
10. G. Veronis, "Nanoscale integrated photonic devices and photovoltaic nanostructures based on plasmonic resonances," 2nd Southeast Symposium on Contemporary Engineering Topics (SSCET), New Orleans, LA, August 2011.
11. G. Veronis, "Plasmonic waveguide-cavity systems for manipulating light at the nanoscale," The 2011 Villa Conference on Interactions Among Nanostructures, Las Vegas, NV, April 2011.
12. G. Veronis, "Plasmonic devices for densely integrated optics and for photovoltaics," Mechanical Engineering Seminar Series, Louisiana State University, Baton Rouge, LA, September 2010.
13. G. Veronis, Z. Yu, M. L. Brongersma, and S. Fan, "Subwavelength plasmonic devices for guiding and concentrating light," 15th International Conference on Computational and Experimental Engineering and Sciences, Honolulu, HI, March 2008.
14. G. Veronis, "Modeling of nanophotonic and plasmonic devices," Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece, September 2007.
15. G. Veronis and S. Fan, "Frequency-domain modeling of photonic crystal and plasmonic devices," International Workshop on Optical Waveguide Theory and Numerical Modeling, Varese, Italy, April 2006.
16. G. Veronis and S. Fan, "Frequency domain modeling of nanophotonic devices," SPIE International Symposium on Microelectronics, MEMS, and Nanotechnology, Brisbane, Australia, December 2005.
17. G. Veronis, U. S. Inan, and V. P. Pasko, "Fundamental properties of inert gas mixtures for plasma display panels," The 27th IEEE International Conference on Plasma Science, New Orleans, LA, June 2000.

Teaching and Advising Activities

Courses Taught

- EE2120: Circuits I, Spring 2010.
- EE3320: Electrical and Magnetic Fields, Spring 2009, Fall 2012, Spring 2013.
- EE4340: Fiber Optic and Microwave Propagation, Spring 2012, Spring 2015, Spring 2017.
- EE7200: Nanophotonics, Fall 2009, Fall 2011, Spring 2014, Spring 2016, Spring 2018.
- EE7000: Computational Electromagnetics, Fall 2008, Spring 2011, Fall 2014, Fall 2016.

(This is a standard teaching load for a faculty member with joint appointment with CCT).

Special Topics Courses Developed and Taught

- EE 7200 (Nanophotonics): The course covers nanoscale structures and devices and their applications for manipulating light at the nanoscale. Content: Maxwell's equations, light-matter interaction, dispersion, optical properties of nanostructures. Photonic crystals. Photonic nanocircuits. Metal optics. Manipulating light with plasmonic nanostructures. Metamaterials.
- EE 7000 (Computational Electromagnetics): Introduction to numerical techniques for the solution of electromagnetic problems in the time and frequency domains with an emphasis on finite-difference methods. Content: Review of Electromagnetics and Maxwell's equations. Finite differencing of partial differential equations. One-dimensional wave equation. The Finite-Difference Time-Domain (FDTD) method. Numerical stability and dispersion. Scattered field formulation. Absorbing boundary conditions. The Finite-Difference Frequency-Domain (FDFD) method. Modeling of dispersive materials. Eigenvalue problems.

Graduate Student Supervision

Ph.D. Dissertations Directed

1. Amirreza Mahigir (Ph.D., Major Professor), ECE LSU, graduated in May 2018. Dissertation title: *Plasmonic Structures for Subwavelength Guiding and Enhanced Light-Matter Interactions*.
2. Ali Haddadpour (Ph.D., Major Professor), ECE LSU, graduated in May 2017. Dissertation title: *Microcavity Enhanced Beaming and Magneto-Optical Switching of Light*.
3. Pouya Dastmalchi (Ph.D., Major Professor), ECE LSU, graduated in December 2015. Dissertation title: *Design and Optimization of Nanoplasmonic Waveguide Devices*.
4. Christopher H. Granier (Ph.D., Co-Major Professor), Physics & Astronomy LSU, graduated in August 2015. Dissertation title: *Optimized Aperiodic Multilayer Structures for Absorbers and Thermal Emitters*.
5. Yin Huang (Ph.D., Major Professor), ECE LSU, graduated in Fall 2012. Dissertation title: *Plasmonic Devices for Manipulating Light at the Nanoscale: Slow-light Waveguides and Compact Couplers*.

M.S. Theses Directed

6. Safura Sharifi (M.S., Major Professor), ECE LSU, graduated in August 2017. Thesis title: *Aperiodic Multilayer Graphene Based Tunable and Switchable Thermal Emitter at Mid-infrared Frequencies.*
7. Iman Zand (M.S., Major Professor), ECE LSU, graduated in December 2015. Thesis title: *Near Total Resonant Light Absorption in a Graphene Monolayer at Multiple Tunable Wavelengths with Multilayer Structures*.

Ph.D. Dissertations in Progress

8. Vahid Foroughi Nezhad (Ph.D., Major Professor), ECE LSU, started in Fall 2014.

9. Chenglong You (Ph.D., Co-Major Professor, supervised jointly with Prof. J. P. Dowling), Physics & Astronomy LSU, started in Fall 2014.
10. Safura Sharifi (Ph.D., Major Professor, supervised jointly with Prof. J. P. Dowling), ECE LSU, started in Spring 2016.

Undergraduate Student Supervision

1. Jennifer Li (LA-STEM Research Scholar), August 2008-June 2010.
2. Ian Reynolds (CCT REU student), June 2010-July 2010.
3. Lindsey Whitehurst (CCT REU student), June 2011-July 2011.
4. Sumit Sarbadhicary (Physics & Astronomy LSU student, supervised jointly with Prof. J. P. Dowling), June 2011-May 2012.
5. Harrison Norman (ECE LSU student), August 2011-May 2012.
6. Francis Afzal (CCT REU student), June 2012-July 2012, June 2013-August 2013.
7. Mario Reyes (CCT REU student), June 2013-August 2013.
8. Simon Lorenzo (Physics & Astronomy LSU student, PFLR program and CCT REU, supervised jointly with Prof. J. P. Dowling), August 2013-September 2017.
9. Summer Flowers (CCT REU student), May 2015-July 2015.
10. Gabriel Vega-Bellido (CCT REU student), May 2016-July 2016.
11. Corey Matyas (Physics & Astronomy LSU student, PFLR program and CCT REU), August 2016-present.
12. Jacob Miller (ECE LSU student, President's Student Aid program), March 2018-present.
13. Allison Miller (CCT REU student), May 2018-July 2018.

Post-Doctoral Fellow Supervision

1. Dr. Changjun Min (jointly with Prof. J. P. Dowling and Dr. T. W. Lee), September 2008-June 2011.

Professional Activities

Conference Technical Program Committee

1. SPIE-Active Photonic Platforms X, August 2018, San Diego, CA.
2. The 62nd International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication (EIPBN) 2018, May 2018, Puerto Rico.
3. SPIE-Active Photonic Platforms IX, August 2017, San Diego, CA.
4. The 61st International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication (EIPBN) 2017, May 2017, Orlando, FL.
5. SPIE-Active Photonic Materials VIII, August 2016, San Diego, CA.
6. The 60th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication (EIPBN) 2016, May 2016, Pittsburgh, PA.
7. SPIE-Active Photonic Materials VII, August 2015, San Diego, CA.
8. The 59th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication (EIPBN) 2015, May 2015, San Diego, CA.
9. Optics for Solar Energy (SOLAR 2013), OSA Topical Meeting, November 2013, Tucson, AZ.
10. The 57th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication (EIPBN) 2013, May 2013, Nashville, TN.
11. Optics for Solar Energy (SOLAR 2012), OSA Topical Meeting, November 2012, Eindhoven, The Netherlands.
12. Optics for Solar Energy (SOLAR 2011), OSA Topical Meeting, November 2011, Austin, TX.
13. 3rd Annual IEEE Green Technologies Conference, April 2011, Baton Rouge, LA.
    - 3rd Annual IEEE Green Technologies Conference 2011 Best Paper Award Selection Committee.
14. Optics for Solar Energy (SOLAR 2010), OSA Topical Meeting, June 2010, Tucson, AZ.

Journal Editorial Board

1. Guest editor, special issue on "Nanoplasmonics and Metamaterials," *International Journal of Optics*, 2011-2012.
2. Editorial board member, *International Scholarly Research Network (ISRN) Optics*, 2011-2014.
3. Editorial board member, *Mathematical Problems in Engineering*, 2014-present.

Book/Proposal Reviewing

Research Proposal Review Panels

1. Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program in the Division of Industrial Innovation and Partnerships (IIP), NSF, 2016.
2. Electronics, Photonics, and Magnetic Devices (EPMD) program in the Division of Electrical, Communications and Cyber Systems (ECCS), NSF, 2016.
3. Energy, Power, and Adaptive Systems (EPAS) program in the Division of Electrical, Communications and Cyber Systems (ECCS), NSF, 2014.
4. Energy, Power, and Adaptive Systems (EPAS) program in the Division of Electrical, Communications and Cyber Systems (ECCS), NSF, 2013.
5. Electronics, Photonics, and Magnetic Devices (EPMD) program in the Division of Electrical, Communications and Cyber Systems (ECCS), NSF, 2013.
6. Electronics, Photonics, and Magnetic Devices (EPMD) program in the Division of Electrical, Communications and Cyber Systems (ECCS), NSF, 2012.
7. Energy, Power, and Adaptive Systems (EPAS) program in the Division of Electrical, Communications and Cyber Systems (ECCS), NSF, 2012.

Research Proposals Reviewed

8. Reviewed 1 proposal for the Division of Materials Research (DMR), NSF, 2016.
9. Reviewed 1 proposal for the Nanyang Technological University in Singapore, 2015.
10. Reviewed 1 proposal for the Kuwait Foundation for the Advancement of Sciences (KFAS), 2013.

11. Reviewed 1 proposal for the Physical Behavior of Materials research program in the Materials Sciences and Engineering (MSE) Division of the Office of Basic Energy Sciences (BES) of the Department of Energy (DoE), 2013.
12. Reviewed 1 proposal for the Division of Materials Research, National Science Foundation (NSF), 2012.
13. Reviewed 1 proposal for the Georgian National Science Foundation, 2010.
14. Reviewed 1 proposal for the Israeli Ministry of Science and Technology, 2009.
15. Reviewed 1 proposal for the Indo-US Science & Technology Forum, 2008.
16. Reviewed 7 proposals for the Economic Development Assistantships competition, Graduate School, Louisiana State University.
17. Reviewed 10 proposals for the Faculty Research Grant program, Office of Research & Economic Development, Louisiana State University.
18. Reviewed 1 proposal for the Summer Stipend program, Office of Research & Economic Development, Louisiana State University.

Fellowship Applications Reviewed

19. Reviewed 6 applications for the Department of Energy (DOE) Office of Science Graduate Fellowship (DOE SCGF) program, 2012.

Book Proposals Reviewed

20. Book proposal reviewer for CRC Press, 2014.
21. Book proposal reviewer for Wiley-VCH, 2010.
22. Book proposal reviewer for John Wiley & Sons, 2008.

Journal Manuscripts Refereed

1. Optics Letters (frequent).
2. Optics Express (frequent).
3. Journal of the Optical Society of America A (frequent).
4. Journal of the Optical Society of America B (frequent).
5. Applied Optics (frequent).
6. Optical Materials Express (frequent).
7. Optics Communications (frequent).
8. Journal of Optics (frequent).
9. Optical Engineering (frequent).
10. IEEE Journal of Lightwave Technology (frequent).
11. IEEE Journal of Quantum Electronics (frequent).
12. IEEE Journal of Selected Topics in Quantum Electronics (frequent).
13. IEEE Photonics Technology Letters (frequent).
14. IEEE Photonics Journal (frequent).
15. Photonics and Nanostructures - Fundamentals and Applications (frequent).
16. Journal of Applied Physics (frequent).
17. Applied Physics Letters (frequent).
18. IEEE Transactions on Nanotechnology (frequent).
19. IEEE Microwave and Wireless Components Letters (frequent).
20. IEEE Transactions on Antennas and Propagation (frequent).
21. IEEE Transactions on Plasma Science (frequent).
22. Journal of Electromagnetic Waves and Applications/Progress in Electromagnetic Research (frequent).
23. Scientific Reports (frequent).
24. Nature Photonics (occasional).
25. Nature Nanotechnology (occasional).
26. Nature Communications (occasional).
27. Nano Letters (occasional).
28. Science Advances (occasional).
29. Optica (occasional).

30. Photonics Research (occasional).
31. Journal of Physics B: Atomic, Molecular & Optical Physics (occasional).
32. Applied Physics B: Lasers and Optics (occasional).
33. Journal of Modern Optics (occasional).
34. Journal of Nanophotonics (occasional).
35. Journal of Nanomaterials (occasional).
36. Chinese Optics Letters (occasional).
37. International Journal of Photoenergy (occasional).
38. Current Applied Physics (occasional).
39. Physics Letters A (occasional).
40. Physica E (occasional).
41. Materials (occasional).
42. ACS Applied Materials & Interfaces (occasional).
43. Organic Electronics (occasional).
44. IEEE Electron Device Letters (occasional).
45. IEEE Transactions on Electron Devices (occasional).
46. IEEE Transactions on Microwave Theory and Techniques (occasional).
47. IET Microwaves, Antennas & Propagation (occasional).
48. Nanophotonics (occasional).
49. Solar Energy Materials and Solar Cells (occasional).
50. Sensors & Actuators B: Chemical (occasional).
51. Journal of Computational Physics (occasional).
52. Journal of Vacuum Science and Technology (occasional).
53. Journal of Micro/Nanolithography, MEMS, and MOEMS (occasional).
54. The European Physical Journal D (occasional).
55. The European Physical Journal - Applied Physics (occasional).
56. The European Physical Journal – Plus (occasional).
57. Journal of Mathematical Analysis and Applications (occasional).
58. Journal of Geophysical Research (Space Physics) (occasional).

Conference Papers Refereed

1. Active Photonic Platforms X, SPIE Optics + Photonics 2018 Conference.
2. The 62st International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2018.
3. The 12th European Conference on Antennas and Propagation (EuCAP 2018) 2018.
4. The 17th IEEE International Conference on Nanotechnology (IEEE NANO 2017).
5. Active Photonic Platforms IX, SPIE Optics + Photonics 2017 Conference.
6. The 61st International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2017.
7. The 11th European Conference on Antennas and Propagation (EuCAP 2017) 2017.
8. Active Photonic Materials VIII, SPIE Optics + Photonics 2016 Conference.
9. The 60th International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2016.
10. The 59th International Conference on Electron, Ion, and Photon Beam Technology & Nanofabrication (EIPBN) 2015.
11. The 9th European Conference on Antennas and Propagation (EuCAP 2015) 2014.
12. Optics for Solar Energy (SOLAR) 2013.
13. The 57th International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2013.
14. Optics for Solar Energy (SOLAR) 2012.
15. The 56th International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2012.
16. Optics for Solar Energy (SOLAR) 2011.
17. The 55th International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2011.

18. 3rd Annual IEEE Green Technologies Conference 2011.
19. Optics for Solar Energy (SOLAR) 2010.
20. The 54th International Conference on Electron, Ion, and Photon Beam Technology, & Nanofabrication (EIPBN) 2010.

Professional Memberships

1. Member, Institute of Electrical and Electronics Engineers (IEEE).
2. Senior Member, Optical Society of America (OSA).
3. Member, International Society for Optics and Photonics (SPIE).

Departmental, College and University Service

- Member of the Ph.D. Committees of 18 students.
- Member of the M.S. Committees of 5 students.
- Member of Ph.D. Committees as Dean's Representative of 7 students.
- Member of the Undergraduate Thesis Committees of 2 students.
- Member, College Policy Committee, College of Engineering, Louisiana State University, 2012-2016.
- Member, Graduate Admissions Committee, Division of Electrical and Computer Engineering, Louisiana State University, 2011-2012, 2016-2017.
- Member, Graduate Studies Committee, Division of Electrical and Computer Engineering, Louisiana State University, 2013-2016.
- Graduate Assessment Coordinator, Division of Electrical and Computer Engineering, Louisiana State University, 2014-2017.
- Member, Internal Advisory Committee, Division of Electrical and Computer Engineering, Louisiana State University, 2016-present.
- Faculty Secretary (Faculty Meeting Minutes), Division of Electrical and Computer Engineering, Louisiana State University, 2013-2014.
- Member, Faculty Search Committee, Nuclear Engineering position (joint MIE/CCT hire), Center for Computation and Technology, Louisiana State University, 2013.
- Member, Faculty Search Committee, Computational Science Applications, Center for Computation and Technology, Louisiana State University, 2011-2012.
- Reviewer, CCT REU program, Center for Computation and Technology, Louisiana State University, 2013-present.
- Reviewer, CCT Distinguished Graduate Dissertation Fellowship program, Center for Computation and Technology, Louisiana State University, 2010.
- Member, Faculty Search Committee, "Optical Communications and their Techno-economic Analysis" position, Department of Informatics and Telematics, School of Digital Technology, Harokopio University, Greece, 2016-2017.