

NEZIH PALA
ASSOCIATE PROFESSOR
ELECTRICAL AND COMPUTER ENGINEERING
FLORIDA INTERNATIONAL UNIVERSITY

EDUCATION

PhD	Rensselaer Polytechnic Institute, Troy, NY	Electrical Engineering	2002
MS	Rensselaer Polytechnic Institute, Troy, NY	Electrical Engineering	1999
BS	Middle East Technical University, Ankara, Turkey	Physics	1996

APPOINTMENTS

2014 -	Associate Professor, Electrical & Computer Engineering, Florida International University, Miami, FL
2008 - 2014	Assistant Professor, Electrical & Computer Engineering, Florida International University, Miami, FL
2002 – 2007	Research Scientist, Sensor Electronic Technology, Inc., Troy, NY
2002 – 2008	Visiting Scholar, Department of ECSE, Rensselaer Polytechnic Institute, Troy, NY
1998 – 2002	Research Assistant, Department of ECSE, Rensselaer Polytechnic Institute, Troy, NY

PUBLICATIONS IN DISCIPLINE

BOOK CHAPTERS

1. "Generation Recombination Noise in GaN-Based Devices", S. L. Romyantsev, N. Pala, M. S. Shur, M. E. Levinshtein, R. Gaska, M. Asif Khan and G. Simin, GaN-based Materials and Devices ed . R. Davis and M. Shur, World Scientific Publishing Co., [ISBN 981-238-844-3](#), (2004).
2. "Terahertz technology for nano applications", N. Pala and A. N.Abbas, Encyclopedia of Nanotechnology, pp. 2653-2667, Springer, [ISBN 978-90-481-9750-7](#), (2012).
3. "Electron Beam Lithography", N. Pala and M. Karabiyik, Encyclopedia of Nanotechnology, pp. 718-740, Springer, [ISBN 978-90-481-9750-7](#), (2012).
4. "Plasmonic Photodetectors", A. Ahmadivand, M. Karabiyik, and N. Pala, Photodetectors: materials, devices, applications, Editor: Bahram Nabet, pp. 157-193, Woodhead Publishing, [ISBN: 978-1-78242-445-1](#) (2016)
5. "Terahertz (THz) detectors", S. Kaya, M. Karabiyik, and N. Pala, Photodetectors: materials, devices, applications, Editor: Bahram Nabet, pp. 373-414, Woodhead Publishing, [ISBN: 978-1-78242-445-1](#) (2016)

PATENTS & INVENTION DISCLOSURES

1. Y. Eroglu, I. Guvenc, N. Pala, "System And Method For Visible Light Communications With Multielement Transmitters And Receivers" US Patent Application No: US 2017/0346559 A1, Published: 11/30/2017.
2. N. Pala, R. Sinha, P. K. Vabbina, "[Portable cortisol sensing platform based on compact UV light sources](#)" US Patent#: US 9,752,980, Filing date: 12/06/2016, Publication date: 09/05/2017, Grant date: 09/05/2017
3. N. Pala, B. Gerislioglu, A. Ahmadivand, M. Karabiyik, "Phase-Change Material Based Reconfigurable Antenna", US Provisional Application No: US 15/653,804, Filed 7/19/2017.

PEER REVIEWED JOURNAL ARTICLES

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95. B. Gerislioglu, A. Ahmadivand, and N. Pala "Functional Quadrumer Clusters for Switching between Fano and Charge Transfer Plasmons", *IEEE Photonics Technology Letters*, Vol. 29, No. 24, pp.2226-2229 (2017) DOI: [10.1109/LPT.2017.2772041](https://doi.org/10.1109/LPT.2017.2772041)
94. A. Ahmadivand, B. Gerislioglu, A. Tomitaka, P. Manickam, A. Kaushik, S. Bhansali, M. Nair, and N. Pala, "Extreme sensitive metasensor for targeted biomarkers identification using colloidal nanoparticles-integrated plasmonic unit cells" *Biomedical Optics Express*, Vol. 9, No. 2, p.373 (2018) DOI: [10.1364/BOE.9.000373](https://doi.org/10.1364/BOE.9.000373)
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27. A. Sevincer, M. Bilgi, M. Yuksel, and N. Pala, "Multi-Transceiver Free-Space-Optical Communication Structures" ACM Annual International Conference on Mobile Computing and Networking (MobiCom), Chicago, IL, September 2010.
26. A. Sevincer, M. Bilgi, M. Yuksel and N. Pala, "Prototyping Multi-Transceiver Free-Space-Optical Communication Structures ", IEEE International Conference on Communications (ICC), Cape Town, South Africa, pp. 1-5, May 23-27, 2010, DOI:[10.1109/ICC.2010.5501774](https://doi.org/10.1109/ICC.2010.5501774)
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24. O. Imafidon, S. Georgakopoulos, P.K. Vabbina, N. Pala, "Multifunctional nanodevices for energy harvesting in unconventional spectral ranges", SPIE Defense, Security, and Sensing, 5 - 9 April 2010. Orlando, Florida, USA; Proceedings of SPIE, Vol. 7679, p. 76792L (2010) DOI:[10.1117/12.855193](https://doi.org/10.1117/12.855193)
23. A. V. Muravjov, D. B. Veksler, V. V. Popov, M. S. Shur, N. Pala, X. Hu, R. Gaska, H. Saxena, R. E. Peale, "Terahertz plasmons in grating-gate AlGaIn/GaN HEMTs", European Conference on Lasers and Electro-Optics 2009 and the European Quantum Electronics Conference. CLEO Europe - EQEC 2009. 14-19 June 2009 pp. 1 - 1, DOI: [10.1109/CLEOE-EQEC.2009.5191761](https://doi.org/10.1109/CLEOE-EQEC.2009.5191761)
22. R. E. Peale, H. Saxena, W. R. Buchwald, G. Aizin, A. V. Muravjov, D. B. Veksler, N. Pala, X. Hu, R. Gaska, M. S. Shur, "Grating-gate tunable plasmon absorption in InP and GaN based HEMTs", *Invited Paper*, SPIE Optics+ Photonics, San Diego, CA, 2 - 6 August 2009; Proceedings of SPIE, Vol. 7467, p. 74670Q (2009) DOI:[10.1117/12.826187](https://doi.org/10.1117/12.826187)
21. A.V. Muravjov, D.B. Veksler, X. Hu, R. Gaska, N. Pala, H. Saxena, R.E. Peale, M.S. Shur, "Resonant terahertz absorption by plasmons in grating-gate GaN HEMT structures", SPIE Defense, Security, and

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20. N. Pala, D. Veksler, A. Muravjov, W. Stillman, R. Gaska, M. S. Shur, "Resonant Detection and Modulation of Terahertz Radiation by 2DEG Plasmons in GaN Grating-Gate Structures", IEEE Sensors 2007 The 6th IEEE Conference on Sensors, Atlanta, GA October 28-31, 2007, pp. 570 - 572 DOI:[10.1109/ICSENS.2007.4388462](https://doi.org/10.1109/ICSENS.2007.4388462)
19. W. Stillman, F. Guarin, V. Yu. Kachorovskii, N. Pala, S. Romyantsev, M.S. Shur and D. Veksler, "Nanometer Scale Complementary Silicon MOSFETs as Detectors of Terahertz and Sub-terahertz Radiation", IEEE Sensors 2007 The 6th IEEE Conference on Sensors, Atlanta, GA October 28-31, 2007, pp. 934 - 937, DOI:[10.1109/ICSENS.2007.4388556](https://doi.org/10.1109/ICSENS.2007.4388556)
18. D. Veksler, A. Muravjov, S. Romyantsev, W. Stillman, N. Pala and M. Shur, "Detection and Homodyne Mixing of Terahertz Gas Laser Radiation by Submicron GaAs/AlGaAs FETs", IEEE Sensors 2007 The 6th IEEE Conference on Sensors, Atlanta, GA October 28-31, 2007, pp. 443 - 445, DOI:[10.1109/ICSENS.2007.4388431](https://doi.org/10.1109/ICSENS.2007.4388431)
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12. S. L. Romyantsev, S. Sawyer, N. Pala, M. S. Shur, Yu. Bilenko, J. P. Zhang, X. Hu, A. Lunev, J. Deng, and R. Gaska, "Low frequency noise of light emitting diodes", SPIE Fluctuation and Noise Symp., May 23-26, 2005, Austin, TX , Noise in Devices and Circuits III, edited by Alexander A. Balandin, François Danneville, M. Jamal Deen, Daniel M. Fleetwood, Proceedings of SPIE Vol. 5844, pp.75-85, (2005) DOI:[10.1117/12.608559](https://doi.org/10.1117/12.608559)
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9. N. Pala, S.L. Rumyantsev, J. Sinius, M.S. Shur, R. Gaska, "Structural and Electrical Properties of CuS Thin Films on Flexible Substrates", Proceedings of 12th International Symposium on Nanostructures: Physics and Technology, St. Petersburg, Russia, June 21–25, 2004.
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7. Invited Paper, N. Pala, S. L. Rumyantsev, M. S. Shur, M. E. Levinshtein, M. Asif Khan, G. Simin, and R. Gaska, "Generation-Recombination Noise in GaN and GaN-based Devices" SPIE's First International Symposium on Fluctuations and Noise, Santa Fe, New Mexico, 1–4 June 2003., SPIE Proceedings Vol. 5113, pp. 217-231, DOI: [10.1117/12.488468](https://doi.org/10.1117/12.488468)
6. N. Pala, S. Rumyantsev, R. Gaska, M. Shur, J. Yang, X. Hu, G. Simin, M. A. Khan, "Low frequency noise in Al_{0.4}Ga_{0.6}N thin films", IEEE Lester Eastman Conference on High Performance Devices, 2002 Proceedings., pp. 164 –171, 2002.
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3. S. L. Rumyantsev, N. Pala, S. Shur, M. E. Levinshtein, R. Gaska, M. Asif Khan, and G. Simin, "Effect of the gate leakage current on noise properties of GaN/AlGaIn HFETs", Proceedings of International Workshop on Nitride Semiconductors; Tokyo, Japan : Inst. Pure & Appl. Phys, 2000, 1002, pp. 938-41.
2. S. L. Rumyantsev, N. Pala, M. S. Shur, M. E. Levinshtein, R. Gaska, X. Hu, J. Yang, G. Simin, and M. Asif Khan, "Low frequency noise in GaN-based transistors", Proceedings 2000 IEEE/ Cornell Conference on High Performance Devices (Cat. No. 00CH37122); Piscataway, NJ, IEEE, 2000, 274 pp. 257-64. DOI: [10.1109/CORNEL.2000.902547](https://doi.org/10.1109/CORNEL.2000.902547)
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PEER REVIEWED CONFERENCE PRESENTATIONS WITHOUT PROCEEDINGS

33. A. Ahmadvand, B. Gerislioglu, and N. Pala "Targeted Protein Detection Using Gold Nanospheres-Based Functionalized Plasmonic Toroidal Terahertz Metamaterials" MRS Fall'17 Meeting, November 26-December 1, 2017, Boston, MA.

32. N Pala, A. Ahmadvand, "Terahertz Toroidal Plasmonics" Russia-Japan-USA-Europe Symposium on Fundamental & Applied Problems of Terahertz Devices & Technologies (RJUSE TeraTech-2017), Troy, NY, Oct. 1 – 6, 2017
31. N. Pala, "Plasmonics for Biomedical Applications", Keynote Speech in Nanomaterials and Devices Track, NanoFlorida 2017, September 23-24, 2017, Miami, FL
30. R. Sinha, A. Ahmadvand, M. Karabiyik, B. Gerislioglu, and N.Pala, "Engineered Core-Shell Nanostructures for Plasmon Enhanced Difference Frequency Generation in Terahertz Range", MRS Fall Meeting, November 27-December 2, 2016, Boston, MA.
29. A. Ahmadvand, M. Karabiyik, R. Sinha, B. Gerislioglu, and N.Pala, "Probing Charge Transfer Plasmons in Metallic Koch-Type Antennas across the Terahertz Domain", MRS Fall Meeting, November 27-December 2, 2016, Boston, MA.
28. A. Ahmadvand, M. Karabiyik, R. Sinha, B. Gerislioglu, N. Pala, "Tunable Terahertz Response of Plasmonic Vee-Shaped Assemblies with a Graphene Monolayer", Progress In Electromagnetics Research Symposium PIERS 2016, August 8-11, 2016, Shanghai, China.
27. N. Pala, A. Ahmadvand, M. Karabiyik, R. Sinha, S. Kaya, M. Shur, THz Components for Integrated Spectrometer-On-Chip Applications, Paper#: 9856-8, SPIE Commercial + Scientific Sensing and Imaging, April 17-21, 2016, Baltimore, MA.
26. M. Karabiyik, N. Pala and M. S. Shur, "Optical Properties of Plasmons in Asymmetric Dual Grating Gate Plasmonic Crystals", Compound Semiconductor Week 2015, June 28-July 2nd, 2015, Santa Barbara, California.
25. N. Pala "Investigation of THz Radiation Coupling into 2DEG Plasmons in Different FETs" WOFE: Workshop On Frontiers in Electronics, December 17-20, 2013, San Juan, Puerto Rico.
24. M. Karabiyik, C. Al-Amin, A.N. Abbas, N. Pala, "Subwavelength Multimode Plasmonic Terahertz Lenses", 2011 Nanoelectronic Devices for Defense & Security (NANO-DDS) Conference, August 29-September 1, 2011, New York, NY.
23. Min-Ki Kwon, Ja-Yeoswaran Vn Kim, Logee. Jayaraman, N. Pala, M. Saif Islam, "Controlled growth of <110> oriented silicon nanowire", SPIE Optics and Photonics, Paper 7768-16, 2010.
22. A. Sevincer, M. Bilgi, M. Yuksel, and N. Pala, "Multi-Transceiver Free-Space-Optical Communication Structures ", ACM Annual International Conference on Mobile Computing and Networking (MobiCom), Chicago, IL, September 2010.
21. A. Sevincer, M. Bilgi, M. Yuksel, and N. Pala, "Prototyping Multi-Transceiver Free-Space-Optical Communication Structures ", Demo Presentation, ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), San Francisco, CA, June 2010.
20. A. Sevincer, M. Bilgi, M. Yuksel and N. Pala, "Multi-Transceiver Free-Space-Optical Communication Structures ", ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), San Francisco, CA, June 2010.
19. M. Bilgi, M. Yuksel, and N. Pala, "3-D for Optical Wireless Localization", 17th IEEE Workshop on Local and Metropolitan Area Networks (LANMAN 2010), May 5-7, 2010, Long Branch, NJ
18. A.V. Muravjov, D.B. Veksler, V.V. Popov, M.S. Shur, N. Pala, X. Hu, R. Gaska, H. Saxena, R.E. Peale, "Terahertz plasmons in grating-gate AlGaIn/GaN HEMTs", Lasers and Electro-Optics 2009 and the

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17. A.V. Muravjov, D.B. Veksler, V.V. Popov, M.S. Shur, N. Pala, X. Hu, R. Gaska, H. Saxena, R.E. Peale, "Plasmon grating-gate GaN HEMT structures for terahertz applications", OTST 2009 — International Workshop on Optical Terahertz Science and Technology, 07 Mar 2009 -11 Mar 2009; Santa Barbara, CA, USA.
16. N. Pala, M. Shur, R. Gaska, "Plasma Wave-based THz Biodetectors", SPIE Optics East 2007,
15. V. Tokranov, S. Oktyabrsky, S.L. Romyantsev, M.S. Shur, N. Pala, R. Jain, J. Yang and R. Gaska, "Properties of HfO₂ Deposited on AlGa_N/Ga_N Structures Using e-beam Technique", The 34th International Symposium on Compound Semiconductors, Kyoto, Japan, October, 15-18, 2007
14. A. Koudymov, N. Pala, Z. Yang, X. Hu, J. Deng, R. Gaska, G. Simin, and M. S. Shur, "Field Engineering using Drain Field Controlling Electrode for Ultra High Frequency GaN-based Power HEMTs", 7th International Conference of Nitride Semiconductors, Las Vegas, NV, September 16-21, 2007
13. Z. Yang, N. Pala, J. Deng, X. Hu, A. Koudymov, G.Simin, J. Yang, R. Gaska, and M. S. Shur "DC and Microwave performance of Recessed Gate III-N HFETs with InGa_N etch-stop layer", 7th International Conference of Nitride Semiconductors, Las Vegas, NV, September 16-21, 2007
12. X. Hu, N. Pala, J. Deng, Z. Yang, G.Simin, J. Yang, R. Gaska, and M. S. Shur, "Gate Recess Technology on AlGa_N/Ga_N HFET with InGa_N as Etch-Stop Layer", 7th International Conference of Nitride Semiconductors, Las Vegas, NV, September 16-21, 2007
11. D. B. Veksler, A. El Fatimy, N. Dyakonova, F. Teppe, W. Knap, N. Pala, R. Gaska, S. Romyantsev, M. S. Shur, D. Seliuta, G. Valusis, S. Bollaert, A. Shchepetov, Y. Roelens, C. Gaquiere, D. Theron and A. Cappy, "Terahertz Detection by GaN-based Field-Effect-Transistors and Heterodimensional Schottky Diodes", International Workshop on Nitride Semiconductors, October 22-27, 2006, Kyoto, Japan,
10. M. Shur, S. Romyantsev, A. Vijayaraghavan, S. Kar, A. Khanna, C. Soldano, N. Pala, R. Vajtai, O. Nalamasu, and P. Ajayan, "Mysteries of Persistent Noise in Single-Wall Carbon Nanotubes", 2006 Advanced Research Workshop, FUTURE TRENDS IN MICROELECTRONICS: Up the Nano Creek, June 26-30, 2006, Crete, Greece
9. S. Sawyer, S. L. Romyantsev, N. Pala, M. S. Shur, Y. U. Bilenko, J. P. Zhang, X. Hu, A. Lunev, J. Deng and R. Gaska; "Low frequency noise of GaN-based UV LEDs", MRS Fall Meeting, Symposium FF, November 28 - December 2, 2005, Boston, MA
8. J. Deng, X. Hu, Q. Fareed, N. Pala, R. Gaska, M. Shatalov, G.Simin, A. Khan and M. Shur, "Deep Ultraviolet AlGa_N Optoelectronic Transistor Arrays", MRS 8th Wide-Bandgap III-Nitride Workshop, September 29 – October 1, 2003, Richmond, VA.
7. S. L. Romyantsev, N. Pala, M. S. Shur, M. E. Levinshtein, A. Dmitriev, M. A. Khan, and G. Simin, "Low frequency noise in GaN-based High Electron Mobility Transistors", 11th International Symposium, Nanostructures: Physics and Technology, St. Petersburg, June 23-28, 2003.
6. N. Pala, S. Romyantsev, M. Shur, R. Gaska, X. Hu, J. Yang, G. Simin and M. A. Khan, "Low Frequency Noise In Algan/Ingan/Gan Double Heterostructure Field Effect Transistors" Paper #: 54823 MRS 2002 Fall Meeting, December 2-6, Boston, MA.
5. S. L. Romyantsev, N. Pala, Y. Deng, W. Knap, M. S. Shur, E. Borovitskaya, R. Gaska, X. Hu, A. M. Khan, G. S. Simin, J. Yang, M. E. Levinshtein, "Low frequency noise in Ga_N/AlGa_N heterostructure field

effect transistors at cryogenic temperatures”, MRS 2001 Fall Meeting, Boston, November 26-30, 2001.

4. V. Adivarahan, G. Simin, G. Tamulaitis, R. Srinivasan, J. Yang, and M. Asif Khan, M. S. Shur, R. Gaska, S. L. Rumyantsev, N. Pala, “High Aluminum Content AlGa_N Solar Blind Photodetectors” ICNS-4: 4th International Conference on Nitride Semiconductors, session B3.4., Denver, Colorado, July 16-20, 2001.
3. S. L. Rumyantsev, N. Pala, M. S. Shur, R. Gaska, M. E. Levinshtein, M. Asif Khan, G. Simin, X. Hu, and J. Yang, “Thin n-GaN films with low level of the 1/f noise”, Noise in physical Systems and 1/f Fluctuations ICNF 2001 16th International Conference, Gainesville, Florida, 22 - 25 October 2001
2. S. L. Rumyantsev, N. Pala, M. S. Shur, R. Gaska, M. E. Levinshtein, M. Asif Khan, G. Simin, X. Hu, and J. Yang, “Low Frequency noise in GaN Field Effect Transistors”, MRS 2000 Fall Meeting, Boston, Massachusetts, November 27 - December 1, 2000.
1. N. Pala, J. Lu, B. Peatman, M. Hurt, M. Shur, “High Temperature Performance of Heterodimensional Junction Field Effect Transistors”, APS Centennial Meeting, Atlanta, 20-26 March, 1999.

OTHER PRESENTATIONS AND LECTURES

4. “Plasmonic Nanoplatfoms for Biochemical Sensing and Medical Applications”, Keynote Speech, Shaastrarth-2017, 5th International Conference on Socio-Economic Impact of Innovations in Sciences & Engineering, 16- 17 December 2017, Raipur, India
3. “Synthesis of Crystalline ZnO Nanorods and Nanoflakes on Arbitrary Substrates at Ambient Conditions”, NSF Nano and Micro Manufacturing Workshop, May 22-23, Dearborn, MI
2. “3D Simulation of THz Plasmonic Devices and FIU Research Capabilities”, Multiscale Multidisciplinary Modeling of Electronic Materials (MSME) Collaborative Research Alliance (CRA) Review Meeting, July 17-18, 2013, Aberdeen Proving Ground, MD
1. Nanotechnology, May 23, 2010 Miami Science Museum

PROFESSIONAL HONORS

1. **IEEE Senior Member**, May 2017
2. **Best Poster Paper Award**, IEEE Sensor Conference, November 1, 2016, Orlando, FL
3. **CEC Outstanding Faculty Research Award**, 2015
4. **Advisor of the Best Presentation Award winner Mr. Chowdhury Al-Amin**, FIU UGS, 2013
5. **Kauffman Professor Award**, February 24, 2011
6. **NSF CAREER Award**, February 2010
7. **Paper of the Month**, Electronics Letters, November 2008
8. **Founders Award of Excellence**, November 2000, Rensselaer Polytechnic Institute, Troy, NY.
9. **MRS Best Paper Award**, MRS Fall Meeting, November 29- December 3 1999, Boston.

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

1. **Associate Editor**; Nanoscience and Nanotechnology Letters, August 2011 - Present
2. **Nanodevices Topic Editor-in-Chief**, Nanomaterials and Nanotechnology Journal, September 2015 - Present
3. **Advisor of Tau Beta Pi, Engineering Honor Society**; Florida Theta Chapter, October 12, 2010 - Present

4. **IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2017**, Technical Program Committee Member, (July 3-5, 2017, Bochum, Germany)
5. **NSF ECCS-CAREER Review Panel**; Electronics, Photonics and Magnetic Devices (EPMD) Program of the Electrical, Communications and Cyber Systems (ECCS) Division, November 21 - 22, 2016.
6. **SPIE Conference Committee Member and Session Chair**; Terahertz Physics, Devices, and Systems X: Advanced Applications in Industry and Defense (Conf 9856), April 17-21, 2016, Baltimore, MD
7. **SPIE Conference Committee Member and Session Chair**; Terahertz Physics, Devices, and Systems VIII: Advanced Applications in Industry and Defense, 5 - 9 May 2014, Baltimore, MD
8. **WOFE Organizing Committee Member**; Workshop on Frontiers in Electronics (WOFE-2015) December 15 - 18, San Juan, Puerto Rico
9. **Guest Speaker in Miami PREP Summer Program**; Nanotechnology: Small World and Great Opportunities, FIU Engineering Center, July 25, 2013
10. **Guest Lecturer in Introduction to Engineering**; Electrical Engineering in a new era and in dimensions: Nanotechnology, FIU Engineering Center, May 30, 2013
11. **WOFE Organizing Committee Member**; Workshop on Frontiers in Electronics (WOFE-2013) December 17 - 20, 2013, San Juan, Puerto Rico
12. **SSL-TR Technical Committee Member**, International Workshop on Solid State Lighting Technologies and Research 2013, August 20-21, Istanbul, Turkey
13. **SPIE Conference Committee Member**; Nanoepitaxy: Materials and Devices V, 25 - 29 August 2013, San Diego, CA
14. **NSF Review Panel**; Electronics, Photonics and Magnetic Devices (EPMD) Program of the Electrical, Communications and Cyber Systems (ECCS) Division, March 20 - 21, 2013.
15. **Hosted FIU CEC Engineering EXPO**, February 2013
16. **Judge in Miami Dade School district STEM Expo**; Miami Dade College, North Campus, Science Complex, Saturday, January 26, 2013
17. **Technical Program Committee Member**; The 9th International Conference on Electronics, Computer and Computation, ICECCO 2012, November 1-3, 2012, Ankara, Turkey
18. **Hosted FIU CEC Engineering EXPO**, February 2012
19. **Judge in Miami Dade School district STEM Expo**; Miami Dade College, North Campus, Science Complex, Saturday, January 22, 2012
20. **NASA EPSCoR Review Panel**; May 5, 2011
21. **NSF Review Panel**; Electronics, Photonics and Magnetic Devices (EPMD) Program of the Electrical, Communications and Cyber Systems (ECCS) Division, January 26 - 27, 2011.
22. **SPIE Conference Committee Member**; Micro- and Nanotechnology Sensors, Systems, and Applications III, 25 - 29 April 2011, Orlando, Florida, USA.
23. **Hosted FIU CEC Engineering EXPO**, February 2011
24. **Public presentation**; "Nanotechnology", Miami Science Museum, May 23, 2010
25. **Hosted FIU CEC Engineering EXPO**, February 2010
26. **SPIE Conference Committee Member**; Micro- and Nanotechnology Sensors, Systems, and Applications II, 5 - 9 April 2010, Orlando, Florida, USA.
27. **NSF Review Panel**; Electronics, Photonics and Device Technology (EPDT) program of the Program of the Electrical, Communications and Cyber Systems (ECCS) Division, January 6 - 7, 2010.
28. **SPIE Conference Committee Member and Session Chair**; Nanosensing: Materials, Devices, and Systems III 1 - 4 October 2006, Boston, MA, USA.
29. **SPIE Conference Committee Member and Session Chair**; Nanosensing: Materials and Devices II 23 - 26 October 2005, Boston, MA, USA.

- 30. SPIE Conference Committee Member and Session Chair;** Nanosensing: Materials and Devices
25 - 28 October 2004, Philadelphia, PA, USA.

GRADUATE STUDENT MAJOR ADVISORSHIP

- 1. Student Name:** Chowdhury Al-Amin
Degree: PhD
Graduation Date: Spring 2016
Dissertation Title: Advanced Graphene Microelectronic Devices
Placement: Intel Corp.
- 2. Student Name:** Phani Kiran Vabbina
Degree: PhD
Graduation Date: Summer 2016
Dissertation Title: Sonochemical Synthesis of Zinc Oxide Nanostructures for Sensing and Energy Harvesting
Placement: Intel Corp.
- 3. Student Name:** Raju Sinha
Degree: PhD
Graduation Date: Spring 2017
Dissertation Title: Tunable, Room Temperature THz Emitters Based On Nonlinear Photonics
Placement: Global Foundries US Inc.
- 4. Student Name:** Mustafa Karabiyik
Degree: PhD
Graduation Date: Spring 2017
Dissertation Title: Terahertz Plasmonic Devices
Placement: Founded See Through Vision Systems LLC
- 5. Student Name:** Arash Ahmadvand
Degree: PhD
Graduation Date: Spring 2018
Dissertation Title: Plasmonics Nanoplatfoms for Biochemical Sensing and Medical Applications
Placement: Postdoctoral Fellow with Nordlander Group at Rice University, TX, USA.

GRADUATE STUDENT DISSERTATION COMMITTEE MEMBERSHIPS

- 1. Student Name:** Huang Huang
Degree: PhD
Graduation Date: Spring 2012
Dissertation Title: Leakage Conscious Power and Thermal Aware Scheduling for Real-Time Computing Systems
Major Professor: Dr. Gang Quan, ECE

- 2. Student Name:** Ali K. Kaviani
Degree: PhD
Graduation Date: Spring 2012
Dissertation Title: Dynamic Modeling and Analysis of Single-Stage Boost Inverters under Normal and Abnormal Conditions
Major Professor: Dr. Kang Yen & Dr. Behrooz Mirafzal
- 3. Student Name:** Ali Mazloomzadeh
Degree: PhD
Graduation Date: Fall 2014
Dissertation Title: Development of Real Time Control Techniques for The Operation of Hybrid Power Systems Involving Distributed Demands and Sustainable Energy Source
Major Professor: Dr. Osama Mohammed
- 4. Student Name:** Chiwon Kang
Degree: PhD
Graduation Date: Summer 2013
Dissertation Title: Enhanced 3-Dimensional Carbon Nanotube Based Anodes For Li-Ion Battery Applications
Major Professor: Dr. Won Bong Choi, MME
- 5. Student Name:** Mahdi Saghaleini
Degree: PhD
Graduation Date: Fall 2012
Dissertation Title: Switching Patterns and Steady-State Analysis of Grid-Connected and Stand-Alone Single-Stage Boost-Inverters for PV Applications
Major Professor: Dr. Kang Yen & Dr. Behrooz Mirafzal
- 6. Student Name:** Eric Huey
Degree: PhD
Graduation Date: Fall 2013
Dissertation Title: Site Specific Growth of Metal Catalyzed Silica Nanowires for Chemical and Biological Sensing
Major Professor: Dr. Shekhar Bhansali
- 7. Student Name:** Guanglei Liu
Degree: PhD
Graduation Date: Summer 2013
Dissertation Title: Practical Dynamic Thermal Management on Intel Desktop Computer
Major Professor: Dr. Gang Qua
- 8. Student Name:** Lilin Guo
Degree: PhD
Graduation Date: Fall 2016

Dissertation Title: A Biologically Plausible Supervised Learning Method for Spiking Neurons with Real-World Applications

Major Professor: Dr. Malek Adjouadi

9. **Student Name:** Ming Fan

Degree: PhD

Graduation Date: Spring 2014

Dissertation Title: Real-Time Scheduling of Embedded Applications on Multi-Core Platforms

Major Professor: Dr. Gang Quan

10. **Student Name:** Mohammadreza Barzegaran Baboli

Degree: PhD

Graduation Date: Spring 2014

Dissertation Title: Physics Based Modeling of Power System Components for the Evaluation of Low Frequency Radiated Electronics

Major Professor: Dr. Osama Muhammad

11. **Student Name:** Qiushi Han

Degree: PhD

Graduation Date: Summer 2015

Dissertation Title: Reliability Aware Resource Management for Real Time Systems

Major Professor: Dr. Gang Quan

12. **Student Name:** Santanu Das

Degree: PhD

Graduation Date: Summer 2012

Dissertation Title: Carbon Nanostructure Based Electrodes for High Efficiency Dye Sensitized Solar Cell

Major Professor: Dr. Won Bong Choi, MME

13. **Student Name:** Shuo Liu

Degree: PhD

Graduation Date: Fall 2014

Dissertation Title: Delay-Sensitive Service Request Scheduling for Cloud Computing

Major Professor: Dr. Gang Quan

14. **Student Name:** Tianyi Wang

Degree: PhD

Graduation Date: Summer 2015

Dissertation Title: On The Design of Real-Time Systems On Multi-Core Platforms Under Uncertainty

Major Professor: Dr. Gang Quan

15. **Student Name:** Abhay Vasudev

Degree: PhD

Graduation Date: Spring 2013

Dissertation Title: Electrochemical Immunosensing of Cortisol in an Automated Microfluidic System Towards Point-Of-Care Applications
Major Professor: Dr. Shekhar Bhansali

16. Student Name: Chaparro-Baquero Gustavo

Degree: PhD

Graduation Date: Spring 2018

Dissertation Title: Memory-Aware Scheduling for Real-Time Systems on Multicore Platforms Considering Timing, Power and Thermal Issues

Major Professor: Dr. Gang Quan

17. Student Name: Chunhui Chen

Degree: PhD

Graduation Date: Spring 2016

Dissertation Title: Advanced Electrode Materials by Electrostatic Spray Deposition For Li-Ion Batteries

Major Professor: Dr. Peggy Wang

18. Student Name: Olutola Jonah

Degree: PhD

Graduation Date: Spring 2013

Dissertation Title: Optimization of Wireless Power Transfer Via Magnetic Resonance in Different Media

Major Professor:

19. Student Name: Kamran Moradi

Degree: PhD

Graduation Date: Spring 2015

Dissertation Title: Acoustic Manipulation and Alignment of Particles for Applications in Separation, Micro-Templating and Device Fabrication

Major Professor: Dr. Bilal El Zahab, MME

20. Student Name: Shi Sha

Degree: PhD

Graduation Date: Spring 2018

Dissertation Title: Thermal and Energy Aware Real-Time Systems Design on Multi-Core Processors

Major Professor: Dr. Gang Quan

21. Student Name: Vivek Chaturvedi

Degree: PhD

Graduation Date: Spring 2013

Dissertation Title: Leakage Temperature Dependency Aware Real-Time Scheduling For Power And Thermal Optimization

Major Professor: Dr. Gang Quan

22. Student Name: Amirhasan Moghadasi

Degree: PhD
Graduation Date: Fall 2017
Dissertation Title: Analysis of Active, Reactive Power Capability and Protection Requirements for Integrating Renewable Energy Sources in Smart Grid Application
Major Professor: Dr Arif Sarwat

23. Student Name: Aparajita Singh

Degree: PhD
Graduation Date: Fall 2016
Dissertation Title: Improving Current-Asymmetry Of Metal-Insulator-Metal Tunnel Junctions
Major Professor: Dr. Shekhar Bhansali

24. Student Name: Leo Babun

Degree: MS
Graduation Date: Spring 2015
Thesis Title: Extended Coverage for Public Safety and Critical Communications Using Multi-Hop and D2D Communications
Major Professor: Dr. Ismail Guvenc

25. Student Name: Muhammad S Khan

Degree: PhD
Graduation Date: Fall 2016
Dissertation Title: Design and Development of Smart Brain-Machine-Brain Interface (SBMIBI) for Deep Brain Stimulation and Other Biomedical Applications
Major Professor: Dr. Hai Deng

26. Student Name: Nadisanka Rupasinghe

Degree: MS
Graduation Date: Spring 2015
Thesis Title: WiFi And LTE Coexistence In The Unlicensed Spectrum
Major Professor: Dr. Ismail Guvenc

27. Student Name: Nico Saputro

Degree: PhD
Graduation Date: Summer 2016
Dissertation Title: Performance Optimization of Network Protocols for IEEE 802.11s-based Smart Grid Communications
Major Professor: Dr. Kemal Akkaya

28. Student Name: Patrick Roman

Degree: PhD
Graduation Date:
Dissertation Title: Mesoscale Ceramic Cylindrical Ion Trap Mass Analyzers for In Situ Sample Analysis
Major Professor: Dr. Shekhar Bhansali

29. Student Name: Richa Agrawal

Degree: PhD
Graduation Date: Spring 2018
Dissertation Title: Hybrid Electrochemical Capacitors: Materials, Optimization, And Miniaturization
Major Professor: Dr. Peggy Wang

30. Student Name: Roberl Kiflemariam

Degree: PhD
Graduation Date: Fall 2015
Dissertation Title: Heat-Driven Self-Cooling System Based on Thermoelectric Generation Effect
Major Professor: Dr. Cheng-Xian Charlie Lin, MME

31. Student Name: Shun Yao

Degree: PhD
Graduation Date: Fall 2017
Dissertation Title: Origami Reconfigurable Electromagnetic Systems
Major Professor: Dr. Stavros Georgakopoulos

32. Student Name: Soheil Soleimanikutanaei

Degree: PhD
Graduation Date:
Dissertation Title: Modelling, Design, and Optimization of Transport Membrane Condenser based Heat Exchangers for Low Grade Heat and Water Recovery
Major Professor: Dr. Cheng-Xian Charlie Lin, MME

33. Student Name: Yong Hao

Degree: PhD
Graduation Date: Spring 2016
Dissertation Title: Sulfur Based Electrode Materials For Secondary Batteries
Major Professor: Dr. Chunlei Peggy Wang, MME

34. Student Name: Xueli Liu

Degree: PhD
Graduation Date:
Dissertation Title: Origami Antennas for Novel Reconfigurable Communication Systems
Major Professor: Dr. Stavros Georgakopoulos

35. Student Name: Armin Vahid Mohammadi

Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Zhe Cheng, MME

36. Student Name: Gustavo A. Chaparro-Baquero

Degree: PhD
Graduation Date: Spring 2018
Dissertation Title:

Major Professor: Dr. Gang Quan

37. Student Name: John Gibson

Degree: PhD

Graduation Date:

Dissertation Title:

Major Professor: Dr. Stavros Georgakopoulos

38. Student Name: Monirojjaman Monshi

Degree: PhD

Graduation Date: Spring 2017

Dissertation Title: Band Gap Engineering of 2D Nanomaterials and Graphene Based Heterostructure Devices

Major Professor: Dr. Irene Calizo

39. Student Name: Osama Awadallah

Degree: PhD

Graduation Date:

Dissertation Title:

Major Professor: Dr. Zhe Cheng, MME

40. Student Name: Rui Guo

Degree: PhD

Graduation Date:

Dissertation Title:

Major Professor: Dr. Wenzhi Li, Physics

41. Student Name: Syed Khalid Pasha

Degree: PhD

Graduation Date:

Dissertation Title:

Major Professor: Dr. Shekhar Bhansali

42. Student Name: Ahmed Jalal

Degree: PhD

Graduation Date:

Dissertation Title:

Major Professor: Dr. Shekhar Bhansali

43. Student Name: Arash Anzalchi

Degree: PhD

Graduation Date: Fall 2017

Dissertation Title: Advanced Solutions for Renewable Energy Integration into the Grid Addressing Intermittency, Harmonics and Inertial Response

Major Professor: Dr. Arif Sarwat

- 44. Student Name:** Bao Kun
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Stavros Georgakopoulos
- 45. Student Name:** Ebenezer Adelowo
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Chunlei Peggy Wang, MME
- 46. Student Name:** Farshad Koohifar
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Ismail Guvenc
- 47. Student Name:** Masood Moghaddami
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Arif Sarwat
- 48. Student Name:** Sadegh Mehdi Aghaei
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Irene Calizo
- 49. Student Name:** Amin Rabiei
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Chunlei Peggy Wang, MME
- 50. Student Name:** Ingrid Torres
Degree: PhD
Graduation Date:
Dissertation Title:
Major Professor: Dr. Sakhrat Khizroev
- 51. Student Name:** Omena O. Omena
Degree: PhD
Graduation Date:
Dissertation Title:

Major Professor: Dr. Chunlei Peggy Wang, MME

52. Student Name: Zihao Liu

Degree: PhD

Graduation Date:

Dissertation Title:

Major Professor: Dr. Wujie Wen

FUNDED RESEARCH

- 1. Role:** PI
Title: Highly Selective Cyanotoxin Biosensors for Portable Water Quality Monitoring Systems
Agency: Eugenio Pino and Family Global Entrepreneurship Center, Kauffman Professors Award
Amount: \$15,000
Duration: 01/01/2010 - 12/31/2011
- 2. Role:** PI
Title: CAREER: Multi-element Plasmonic Devices for Tunable THz Detection
Agency: National Science Foundation
Amount: \$400,000
Duration: 05/01/2010 - 04/30/2015
- 3. Role:** PI
Co-PIs: Dr. Mert Atilhan (Qatar University), Dr. Cafer Yavuz (Korea Advanced Institute of Science and Technology), Dr. Michael Shur (Rensselaer Polytechnic Institute)
Title: Integrated Terahertz Technologies for Methane Gas Production from Clathrates and Real Time Analysis
Agency: Qatar National Research Fund
Amount: \$1,041,640
PI's Amount : \$284,249
Duration: 01/01/2011 - 12/31/2013
- 4. Role:** PI
Co-PI: Dr. Behrooz Mirafzal
Title: GREAT Lab: Green and Renewable Energy Applications Teaching Lab
Agency: FIU - Division of Information Technology
Amount: \$249,000
PI's Amount : \$167,000
Duration: 01/01/2011 - 4/30/2011
- 5. Role:** PI
Title: Tunable THz Plasmonic Detectors
Agency: DoE Oak Ridge National Lab, Center for Nanophase Materials Sciences Usage Support
Amount: Non-monetary, Free use of nanofabrication facilities.
Duration: 06/01/2010 - 5/31/2011

6. **Role:** Co-PI
Title: An Open-Source Integrated Computing Infrastructure to Support the Life Cycle Design And Engineering Of High Performance Buildings
Agency: FIU, Department of Research
Amount: \$30,000
Duration: 07/01/2011 - 8/30/2012
7. **Role:** PI
Title: FIU NanoEd Initiative
Agency: FIU Division of Information Technology — Instructional Classroom Technologies
Amount: \$425,000
Duration: 9/1/2011 – 8/30/14
8. **Role:** PI
Title: Graphene Based Nanoscale Terahertz Devices
Agency: FIU, Department of Research – FRSP Program
Amount: \$30,000
Duration: 1/1/2012 – 12/31/2012
9. **Role:** PI
Title: A New Route Toward Systematic Control of Electronic Structures of Graphene and Fabrication of Graphene Field Effect Transistors
Agency: Dept of the Army -- Materiel Command
Amount: \$619,339.77
Duration: 8/15/2012-08/14/2015
10. **Role:** PI
Title: Multi-Element Free-Space-Optical Modules for Mobile Communications and Smart Lighting – Student Senior Design Support
Agency: NASA
Amount: \$500
Duration: 9/1/2012 –05/31/2013
11. **Role:** PI
Title: Quantum and molecular dynamics studies of natural gas hydrates
Agency: DoE NERSC: National Energy Research Scientific Computing Center
Amount: Non-monetary, Free use of supercomputing facilities.
Duration: 01/10/2012 - 01/07/2013
12. **Role:** PI
Title: 3D Simulation of THz Plasmonic Structures
Agency: Army Research Laboratory, subcontract from University of Utah
Amount: \$65,000 /year
Duration: 1/7/2013 – 12/31/2015

- 13. Role:** Co-PI
Co-PIs: Yimin Zhu, Thomas Spiegelhalter, Ismail Guvenc
Title: On Track to Carbon Neutral Buildings
Agency: United States Environmental Protection Agency
Amount: \$15,000
Duration: 08/15/2013 - 08/14/2014
- 14. Role:** PI
Title: Building a Test Bed for Hybrid Photovoltaic Solar-Thermal (PVT) Systems
Agency: Florida Power & Light Company
Amount: \$75,000
Duration: 8/1/2013 – 7/30/2014
- 15. Role:** Senior Personnel (this program allows only one Co-PI)
Co-PI: Masoud Milani, Laird H Kramer
Title: RET in Engineering and Computer Site: Nanotechnology Research Experiences for Teachers at FIU
Agency: NSF
Amount: \$479,903
Duration: 1/01/2014 – 12/31/2016
- 16. Role:** PI
Title: Self-Powered Wearable Sensor Arrays for Multiplexed Human Sweat Analysis
Agency: NASA -- Student Senior Design Support
Amount: \$500
Duration: 4/1/2014 – 12/31/2014
- 17. Role:** PI
Co-PI: Ismail Guvenc
Title: NeTS:Small:Collaborative Research: Multi-Element Illumination for Mobile Free-Space-Optical Networks
Agency: NSF
Amount: \$250,000
Duration: 7/01/2014 – 6/30/2017
- 18. Role:** PI
Title: Numerical investigating of nonlinear optical nanostructures
Agency: Army Research Laboratory
Amount: \$90,000/year
Duration: 1/1/2016 – 12/31/2022
- 19. Role:** PI
Title: Self-Powered Wearable Sensor Arrays for Multiplexed Human Sweat Analysis
Agency: NSF – ASSIST Center
Amount: \$60,000

Duration: 8/1/2016 – 7/31/2017