Curriculum Vitae

November 2020
Dept. of Electrical and Computer Engineering, Marquette University
1515 W. Wisconsin Ave., Milwaukee, WI 53233
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Education

- **Ph.D.** Electrical Engineering, University of Minnesota, Twin Cities 2004
- **M.Sc.** Electronics, Technical Univ. "Gh. Asachi" of Iasi, Romania 1998
- **B.S.** Microelectronics, Technical Univ. "Gh. Asachi" of Iasi, Romania 1996

Research Interests

- Design methods for network-on-chip based chip multiprocessors and datacenters
- Design methods for embedded systems under uncertainty
- Applications of FPGAs, reconfigurable computing and parallel computing
- Analysis and optimization of power systems and smart buildings
- Electronic design automation for VLSI and FPGA circuits

Employment

- **Associate Professor** Aug. 2020 - present
  Dept. of Electrical and Computer Engineering
  Marquette University, Milwaukee, WI
- **Assistant Professor - tenure track** Aug. 2013 - Aug. 2020
  Dept. of Electrical and Computer Engineering
  Marquette University, Milwaukee, WI
- **Assistant Professor - tenure track** Aug. 2012 - Aug. 2013
  Dept. of Electrical Engineering
  The State University of New York (SUNY) at Buffalo, Buffalo, NY
- **Assistant Professor - tenure track** Aug. 2008 - Aug. 2012
  Dept. of Electrical and Computer Engineering
  North Dakota State University (NDSU), Fargo, ND
- **Research and Development (R&D) Engineer** Sep. 2004 - July 2008
  Magma Design Automation, Inc., San Jose, CA

Summary

MU = Marquette University, UB = The State University of New York (SUNY) at Buffalo, NDSU = North Dakota State University

Research

- 29 refereed journal papers (18 at MU)
- 53 refereed conference papers (26 at MU)
- Google Scholar citations count = 1426, h-index = 18, i10-index = 26
- Semantic Scholar highly influential citations = 94
- Grants (External): Total $2,607,918 ($2,527,041 at MU); $1,024,628 ($968,751 at MU) as PI
- Grants (Internal, Travel, and Donations): Total $187,056 ($139,761 at MU); $113,002 ($65,707 at MU) as PI
- Research Student Advising
  - 6 Ph.D. graduates – Chair of Dissertation Committee (1 at NDSU, 1 at MU, 4 current)
  - 11 M.S. graduates – Chair of Thesis Committee (3 at NDSU, 6 at MU, 2 current)
  - 11 Undergraduate research assistants (2 at NDSU, 7 at MU, 2 current)

Teaching

- 11 different courses taught (4 at MU)
- 6 new courses developed (2 at MU)
- 1 EECE Module in Engineering Discovery 1 (GEEN-1200) - co-taught with Prof. S.C. Schneider at MU

Service

- Selected Service at University
  - Committee member, Electrical and Computer Engineering, Undergraduate Committee
  - ADVANCE Program team member, Marquette University
  - Advocate of NDSU ADVANCE FORWARD (Focus on Resources for Women's Advancement, Recruitment/Retention, and Development), NDSU
  - 4 times WE-GIRLS Summer Camp for girls grades 6-8
- Service outside University
  - 9 times proposal reviewer and panelist for the National Science Foundation (NSF)
  - Reviewer for 22 journals and 8 conferences
  - Technical program committee member for 8 conferences and for Ph.D. DAC Forum
  - Member of the editorial board for 1 journal
  - Guest editor for 2 journals

Papers in Journals – Peer Refereed

Summary: 29 Journal papers (18 while at Marquette)
Electronic versions in PDF format are available at `http://dejazzer.com/publications.html`
*Author names marked with * denote advised graduate students - as Chair of Dissertation/Thesis Committee*
*Author names marked with ** denote advised undergraduate students - as research mentor and sponsor*

1. W. Guan*, M.G. Moghaddam*, and **C. Ababei**, "Quantifying the impact of uncertainty in embedded systems mapping for NoC based architectures," *Elsevier Microprocessors and Microsystems*, Nov. 2020.
2. S. Duerr*, **C. Ababei**, and D.M. Ionel, "A case for using distributed energy storage for load balancing and power loss minimization in distribution networks," *Electric Power Components & Systems Journal*, vol. 48, no. 9-10, pp. 1063-1076, Oct. 2020.
3. L. Bosman, S. Roy, W. McDonald, and **C. Ababei**, "Using online discussions to connect theory and practice in core engineering undergraduate courses," *Wiley Computer Applications in Engineering Education*, vol. 28, no. 3, pp. 675-691, May 2020.
4. H. Gong, V. Rallabandi, D.M. Ionel, D. Colliver, S. Duerr*, and **C. Ababei**, "Dynamic modeling and optimal design for net zero energy houses including hybrid electric and thermal energy storage," *IEEE Trans. on Industry Applications*, vol. 56, no. 4, pp. 4102-4113, July-Aug. 2020.
5. K. Etta**, C. Gilger**, A. Maatman**, T. Ren**, L. Wedel**, C. Tamma, and **C. Ababei**, "A 320x256 RGB LED electronic display controlled via WiFi from mobile application," *The Journal of Open Engineering*, Feb. 2020.
6. K. Conley**, A. Foyer**, P. Hara**, T. Janik**, J. Reichard**, J. D'Souza**, C. Tamma, and **C. Ababei**, "Vibration alert bracelet for notification of the visually and hearing impaired," *The Journal of Open Hardware*, vol. 3, no. 1, pp. 1-11, Oct. 2019.
7. K. Carey*, N. Zimmerman*, and **C. Ababei**, "Hybrid field oriented and direct torque control for sensorless BLDC motors used in aerial drones," *IET Power Electronics*, vol. 12, no. 3, pp. 438-449, Jan. 2019.
8. **C. Ababei** and M.G. Moghaddam*, "A survey of prediction and classification techniques in multicore processor systems," *IEEE Trans. on Parallel and Distributed Systems (TPDS)*, vol. 30, no. 5, pp. 1184-1200, May 2019.
9. T. Nandy, R. Coutu, and **C. Ababei**, "Carbon monoxide sensing technologies for next-generation cyber-physical systems," *MDPI sensors*, vol. 10, no. 18, pp. 1-29, Oct. 2018.

10. M.G. Moghaddam*, W. Guan*, and **C. Ababei**, "Dynamic energy optimization in chip multiprocessors using deep neural networks," *IEEE Trans. on Multi-Scale Computing Systems (TMSCS)*, vol. 4, no. 4, pp. 649-661, Oct.-Dec. 2018.
11. M.G. Moghaddam* and **C. Ababei**, "Dynamic lifetime reliability management for chip multiprocessors," *IEEE Trans. on Multi-Scale Computing Systems (TMSCS)*, vol. 4, no. 4, pp. 952-958, Oct.-Dec. 2018.
12. M.G. Moghaddam* and **C. Ababei**, "Dynamic energy management for chip multiprocessors under performance constraints," *Elsevier Microprocessors and Microsystems*, vol. 54, pp. 1-13, Oct. 2017.
13. J.E. Richie and **C. Ababei**, "Optimization of patch antennas via multithreaded simulated annealing based design exploration," *Elsevier Journal of Computational Design and Engineering*, vol. 4, no. 4, pp. 249-255, Oct. 2017.
14. M.G. Moghaddam* and **C. Ababei**, "Performance evaluation of Network-on-Chip based H.264 video decoders via full system simulation," *IEEE Embedded Systems Letters*, vol. 9, no. 2, pp. 49-52, March 2017.
15. P. Irgens**, C. Bader**, T. Le**, D. Saxena**, and **C. Ababei**, "An efficient and cost effective FPGA based implementation of the Viola-Jones face detection algorithm," *Elsevier Journal HardwareX*, vol. 1, pp. 68-75, April 2017.
16. S. Duerr*, **C. Ababei**, and D.M. Ionel, "SmartBuilds: an energy and power simulation framework for buildings and districts," *IEEE Trans. on Industry Applications*, vol. 53, no. 1, pp. 402-410, 2016, Jan.-Feb. 2017.
17. **C. Ababei**, S. Duerr*, J. Ebel**, R. Marineau*, M.G. Moghaddam* and T. Sewell, "Open source digital camera on field programmable gate arrays," *Int. Journal of Handheld Computing Research (IJHCR)*, vol. 7, no. 4, pp. 30-40, 2016.
18. A.Y. Yamamoto* and **C. Ababei**, "Unified reliability estimation and management of NoC based chip multiprocessors," *Elsevier Microprocessors and Microsystems*, vol. 38, no. 1, pp. 53-63, Feb. 2014.
19. H. Sajjadi Kia* and **C. Ababei**, "A new reliability evaluation methodology with application to lifetime oriented circuit design," *IEEE Trans. on Device and Materials Reliability*, vol. 13, no. 1, pp. 192-202, March 2013.
20. B.-R.V. Vinnakota and **C. Ababei**, "Determination of the minimum break point set of directional relay networks based on k-trees of the network graphs," *IEEE Trans. on Power Delivery*, vol. 26, no. 4, pp. 2318-2323, Oct. 2011.
21. **C. Ababei** and R. Kavasseri, "Efficient network reconfiguration using minimum cost maximum flow based branch exchanges and random walks based loss estimations," *IEEE Trans. on Power Systems*, vol. 26, no. 1, pp. 30-37, Feb. 2011.
22. V. de Paulo** and **C. Ababei**, "3D Network-on-Chip architectures using homogeneous meshes and heterogeneous floorplans," *Hindawi Int. Journal of Reconfigurable Computing (IJRC) — Special Issue on Int. Conference on Reconfigurable Computing and FPGAs (ReConFig 2009)*, 2010.
23. **C. Ababei**, S. Yuvarajan, and D.L. Schulz, "Toward integrated PV panels and power electronics using printing technologies," *Elsevier Solar Energy*, vol. 84, pp. 1111-1123, July 2010.
24. **C. Ababei**, "Speeding up FPGA placement via partitioning and multithreading," *Hindawi Int. J. of Reconfigurable Computing (IJRC)*, 2009.
25. G. Wang, S. Sivaswamy, **C. Ababei**, K. Bazargan, R. Kastner, and E. Bozorgzadeh, "Statistical analysis and design of HARP routing pattern FPGAs," *IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol. 25, no. 10, pp. 2088-2102, Oct. 2006.
26. **C. Ababei**, H. Mogal, and K. Bazargan, "Three-dimensional place and route for FPGAs," *IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol. 25, no. 6, pp. 1132-1140, June 2006.
27. **C. Ababei**, Y. Feng, B. Goplen, H. Mogal, T. Zhang, K. Bazargan, and S.S. Sapatnekar, "Placement and routing in 3D integrated circuits," *IEEE Design and Test*, vol. 22, no. 6, pp. 520-531, Nov.-Dec. 2005.

28. **C. Ababei** and K. Bazargan, "Non-contiguous linear placement for reconfigurable fabrics," *Int. Journal of Embedded Systems*, Issue 4/5, Interscience Publishers, 2005.
29. P. Maidee, **C. Ababei**, and K. Bazargan, "Timing-driven partitioning-based placement for island style FPGAs," *IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol. 24, no. 3, pp. 395-406, Mar. 2005.

Papers in Conferences with Archived Proceedings – Peer Refereed

Summary: 53 Conference papers (26 while at Marquette)

1. R.E. Alden, H. Gong, **C. Ababei**, and D.M. Ionel, "LSTM forecasts for smart home electricity usage," *Int. Conference on Renewable Energy Research and Applications (ICRERA)*, Glasgow, United Kingdom, Sep. 2020.
2. W. Guan*, M.G. Moghaddam*, and **C. Ababei**, "Reliability optimization under severe uncertainty for NoC based architectures using an info-gap decision approach," *IEEE Int. Midwest Symposium on Circuits and Systems (MWSCAS)*, August 2020.
3. W. Guan*, M.G. Moghaddam*, and **C. Ababei**, "Impact of uncertainty and correlations in mapping of embedded systems," *IEEE Int. Midwest Symposium on Circuits and Systems (MWSCAS)*, Dallas, TX, Aug. 2019.
4. W. Guan*, M.G. Moghaddam*, and **C. Ababei**, "Qin: a deep neural network based scheduler for energy optimization in heterogeneous datacenters," *IEEE Computer Software and Applications Conference (COMPSAC)*, June 2019.
5. M.G. Moghaddam* and **C. Ababei**, "A case for heterogeneous Network-on-Chip based H.264 video decoders," *ACM Great Lakes Symposium on VLSI (GLSVLSI)*, Washington, DC, May 2019.
6. H. Gong, V. Rallabandi, D.M. Ionel, D. Colliver, S. Duerr*, and **C. Ababei**, "Net zero energy houses with constant PV generation supported by electric water heater and battery energy storage," *IEEE Energy Conversion Congress and Exposition (ECCE)*, 2018.
7. W. Guan*, M.G. Moghaddam*, and **C. Ababei**, "Uncertainty aware mapping of embedded systems for reliability, performance, and energy," *IEEE Int. Symposium on Quality Electronic Design (ISQED)*, Santa Clara, CA, March 2018.
8. I. Barge* and **C. Ababei**, "H.264 video decoder implemented on FPGAs using 3x3 and 2x2 networks-on-chip," *IEEE Int. Conf. on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2017.
9. M.G. Moghaddam*, W. Guan*, and **C. Ababei**, "Investigation of LSTM based prediction for dynamic energy management in chip multiprocessors," *IEEE Int. Green and Sustainable Conference (IGSC), Workshop on Energy-efficient Networks of Computers (E2NC): from the Chip to the Cloud*, Orlando, FL, Oct. 2017.
10. S. Duerr*, **C. Ababei**, and D.M. Ionel, "Load balancing with energy storage systems based on co-simulation of multiple smart buildings and distribution networks," *Int. Conference on Renewable Energy Research and Applications (ICRERA)*, San Diego, CA, Nov. 2017.
11. **C. Ababei**, "Working on a start-up: a case for an applied entrepreneurship oriented course for senior undergraduates," *IEEE Frontiers in Education Conference (FIE)*, Indianapolis, IN, Oct. 2017.
12. I. Barge* and **C. Ababei**, "A network-on-chip based H.264 video decoder prototype implemented on FPGAs," *IEEE Int. Symposium on Field-Programmable Custom Computing Machines (FCCM)*, Napa, CA, Apr. 2017.
13. M.G. Moghaddam* and **C. Ababei**, "Investigation of DVFS for Network-on-Chip based H.264 video decoders with truly real workload," *IEEE Energy-efficient Networks of Computers (E2NC): from the Chip to the Cloud, Int. Green and Sustainable Computing Conference (IGSC)*, Hangzhou, China, Nov. 2016.
14. N. Zimmerman*, K. Carey*, and **C. Ababei**, "On aerial indoor position control and system integration for quadcopters using lidars," *ASME Dynamic Systems and Control Conf. (DSCC)*, Minneapolis, MN, Oct. 2016.

15. **C. Ababei** and S.C. Schneider, "Arduino to the rescue: swaying undecided freshmen engineering students to electrical and computer engineering," *ASEE Midwest Section Conference*, Manhattan, KS, Sep. 2016.
16. **C. Ababei**, S. Duerr*, J. Ebel*, R. Marineau*, M.G. Moghaddam*, and T. Sewell, "Open source digital camera on field programmable gate arrays," *IEEE Int. Conf. on Electro Information Technology (EIT)*, Grand Forks, ND, May 2016.
17. M.G. Moghaddam*, A. Yamamoto*, and **C. Ababei**, "Investigation of DVFS based dynamic reliability management for chip multiprocessors," *Int. Workshop on Dependable Many-Core Computing (DMCC)*, Amsterdam, Netherlands, July 2015.
18. S. Duerr*, **C. Ababei**, and D.M. Ionel, "SmartBuilds: an energy and power simulation framework for buildings and districts," *IEEE Energy Conversion Congress and Exposition (ECCE)*, Montreal, Canada, Sep. 2015.
19. **C. Ababei** and A.M. Miron, "Emulating working in a company in the classroom: a case for hands-on multiple projects oriented course" *ASEE Zone III Meeting*, Springfield, MO, Sep. 2015.
20. H. Sajjadi Kia*, **C. Ababei**, S. Srinivasan, and S. Jabeen, "A new scalable fault tolerant routing algorithm for networks-on-chip," *IEEE Int. Midwest Symposium on Circuits and Systems (MWSCAS)*, Fort Collins, CO, Aug. 2015.
21. **C. Ababei**, R. Kavasseri, and M.A. Zare, "Net reordering and multicommodity flow based global routing for FPGAs," *IEEE Int. Conf. on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2014.
22. M.A. Zare, R. Kavasseri, and **C. Ababei**, "FPGA-based design and implementation of direct torque control for induction machines," *IEEE Int. Conf. on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2014.
23. **C. Ababei** and N. Mastronarde, "Benefits and costs of prediction based DVFS for NoCs at router level," *IEEE Int. SoC Conference (SOCC)*, Las Vegas NV, Sep. 2014.
24. **C. Ababei** and C. Tamma, "Distributed minimum energy point tracking for systems-on-chip," *IEEE Int. Conf. on Electro Information Technology (EIT)*, Milwaukee, WI, 2014.
25. H. Sajjadi Kia*, M.A. Zare, R. Kavasseri, and **C. Ababei**, "Dynamic simulation of direct torque control of induction motors with FPGA based accelerators," *IEEE Int. Conference on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2013.
26. **C. Ababei** and A.M. Miron, "Addressing early the gender gap in electrical engineering via summer camps for girls," *ASEE North Midwest Section Conference*, Fargo, ND, Oct. 2013.
27. A.Y. Yamamoto* and **C. Ababei**, "Unified system level reliability evaluation methodology for multiprocessor systems-on-chip," *IEEE Int. Green Computing Conference, Lighter-than-Green Dependable Multicore Architectures Workshop*, San Jose CA, June 2012.
28. H. Sajjadi Kia* and **C. Ababei**, "A new reliability evaluation methodology and its application to Network-on-Chip routers," *IFIP/IEEE Int. Conference on Very Large Scale Integration (VLSI-SoC)*, Santa Cruz CA, Oct. 2012.
29. H. Sajjadi Kia* and **C. Ababei**, "Efficient high-speed current-mode links for network-on-chip performance optimization," *IEEE Int. SoC Conference (SOCC)*, Niagara Falls NY, Sep. 2012.
30. R. Katti and **C. Ababei**, "Secure comparison without explicit XOR," *Ninth European Dependable Computing Conference*, Sibiu, Romania, May 2012.
31. H. Sajjadi Kia* and **C. Ababei**, "Improving fault tolerance of Network-on-Chip links via minimal redundancy and reconfiguration," *IEEE Int. Conference on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2011.
32. H. Sajjadi Kia* and **C. Ababei**, "A new fault-tolerant and congestion-aware adaptive routing algorithm for regular Networks-on-Chip," *IEEE Congress on Evolutionary Computation (CEC)*, New Orleans LA, June 2011.
33. **C. Ababei**, H. Sajjadi Kia*, O.P. Yadav, and J. Hu, "Energy and reliability oriented mapping for regular Networks-on-Chip," *ACM/IEEE Int. Symposium on Networks-on-Chip (NOCS)*, Pittsburg PA, May 2011.

34. **C. Ababei**, "Efficient congestion-oriented custom Network-on-Chip topology synthesis," *IEEE Int. Conference on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2010.
35. **C. Ababei**, "Network-on-Chip design and optimization using specialized influence models," *ACM/IEEE Design Automation Conference (DAC)*, Anaheim CA, June 2010.
36. **C. Ababei** and R. Kavasseri, "Efficient extreme event screening for power systems using constrained and unbalanced partitioning," *IEEE PES General Meeting*, Minneapolis MN, July 2010.
37. **C. Ababei** and R. Kavasseri, "Speeding-up network reconfiguration by minimum cost maximum flow based branch exchanges," *IEEE PES Transmission and Distribution Conference and Exposition*, New Orleans LA, Apr. 2010.
38. V. de Paulo* and **C. Ababei**, "A framework for 2.5D NoC exploration using homogeneous networks over heterogeneous floorplans," *IEEE Int. Conference on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2009.
39. **C. Ababei** and R. Katti, "Achieving Network-on-Chip fault tolerance by adaptive remapping," *IEEE Int. Parallel and Distributed Processing Symposium (IPDPS), Reconfigurable Architectures Workshop (RAW)*, Rome, Italy, May 2009.
40. **C. Ababei**, "Parallel placement for FPGAs revisited," *IEEE ACM/SIGDA Symposium on Field Programmable Gate Arrays (FPGA)*, Monterey CA, Feb. 2009.
41. **C. Ababei**, H. Mogal, and K. Bazargan, "3D FPGAs: placement, routing and architecture evaluation," *IEEE ACM/SIGDA Symposium on Field Programmable Gate Arrays (FPGA)*, Monterey CA, Feb. 2005.
42. S. Sivaswamy, G. Wang, **C. Ababei**, K. Bazargan, R. Kastner, and E. Bozorgzadeh, "HARP: hard-wired routing pattern FPGAs," *IEEE ACM/SIGDA Symposium on Field Programmable Gate Arrays (FPGA)*, Monterey CA, Feb. 2005.
43. **C. Ababei**, H. Mogal, and K. Bazargan, "Three-dimensional place and route for FPGAs," *ACM/IEEE Asia-South Pacific Design Automation Conference (ASP-DAC)*, pp. 773-778, 2005.
44. **C. Ababei**, P. Maidee, and K. Bazargan, "Exploring potential benefits of 3D FPGA integration," *ACM Field-Programmable Logic and its Applications (FPL)*, Antwerp, Belgium, 2004.
45. **C. Ababei** and K. Bazargan, "Non-contiguous linear placement for reconfigurable fabrics," *IEEE Int. Parallel and Distributed Processing Symposium (IPDPS), Reconfigurable Architectures Workshop (RAW)*, Santa Fe NM, 2004.
46. **C. Ababei** and K. Bazargan, "Placement method targeting predictability robustness and optimality," *ACM/IEEE Int. Conference on Computer-Aided Design (ICCAD)*, pp. 81-85, 2003.
47. P. Maidee, **C. Ababei**, and K. Bazargan, "Fast timing-driven partitioning-based placement for island style FPGAs," *ACM/IEEE Design Automation Conference (DAC)*, pp. 598-603, 2003.
48. **C. Ababei** and K. Bazargan, "Timing minimization by statistical timing hMetis-based partitioning," *Int. Conference on VLSI Design*, pp. 58-63, 2003.
49. **C. Ababei**, N. Selvakkumaran, K. Bazargan, and G. Karypis, "Multi-objective circuit partitioning for cut-size and path-based delay minimization," *ACM/IEEE Int. Conference on Computer-Aided Design (ICCAD)*, pp. 81-85, 2002.
50. **C. Ababei** and K. Bazargan, "Statistical timing driven partitioning for VLSI circuits," *ACM/IEEE Design Automation and Test in Europe Conference (DATE)*, 2002.
51. **C. Ababei** and R. Marculescu, "Low-power realizations of secure chaotic communication schemes," *IEEE Asia Pacific Conference on Circuits and Systems*, 2000.
52. **C. Ababei**, V. Sundarajan, and R. Marculescu, "Probabilistic aspects of crosstalk in CMOS ICs," *IEEE Custom Integrated Circuits Conference (CICC)*, 2000.
53. R. Marculescu and **C. Ababei**, "Improving simulation efficiency for circuit-level power estimation," *IEEE Int. Symposium on Circuits and Systems (ISCAS)*, 2000.

Papers in Journals and Conferences Before 1999 – Peer Refereed

Summary: 4 Journal and 4 Conference papers

1. C. Orita and **C. Ababei**, "Control circuit for forcing the uninterrupted optimum regime in the inductive transfer DC-DC converters," *Bulletin of the Polytechnic Institute of Jassy*, 1999.
2. C. Orita and **C. Ababei**, "Isolated base drive control circuit for high power switching BJTs," *Bulletin of the Polytechnic Institute of Iasi*, 1999.
3. C. Orita and **C. Ababei**, "Isolated gate drive control circuit for high power switching devices," *Bulletin of the Polytechnic Institute of Iasi*, 1999.
4. **C. Ababei** and M. Derevlean, "On passive overunity-gain networks synthesis and their use in oscillators," *IEEE Int. Symposium on Signals, Circuits and Systems (ISSCS)*, Iasi, Romania, July 1999.
5. M. Derevlean, L. Turic, and **C. Ababei**, "On the amplitude stability of the most common amplitude limiting networks," *IEEE Int. Symposium on Signals, Circuits and Systems (ISSCS)*, Iasi, Romania, July 1999.
6. C. Orita and **C. Ababei**, "Isolated gate driving circuit for high power switching MOS," *IEEE Int. Symposium on Signals, Circuits and Systems (ISSCS)*, Iasi, Romania, July 1999.
7. M. Derevlean and **C. Ababei**, "A new method for electrolytic capacitors measuring," *IEEE Int. Symposium on Electronics and Telecommunications (ISETC)*, Timisoara, Romania, Sep. 1998.
8. C. Orita and **C. Ababei**, "Fully controlled DC-DC converter with capacitive load," *The Japan Society of Applied Electromagnetics and Mechanical Systems (JSAEM)*, Nov. 1998.

Teaching

*Courses marked with * denote completely redesigned or new developed courses*

Dept. of Electrical and Computer Engineering, Marquette University, Milwaukee, WI

- Computer hardware, COEN-4710, S15, S16, S17, S18, S19, S20
- Embedded systems*, COEN-4720, F14, F15, F16, F17, F18, F19, F20
- Computer architecture, COEN-4730, F13, F14, F15, F16, F17, F18, F19, F20
- Advanced VHDL and FPGA design (Developments in computer hardware)*, EECE-4740, EECE-5740, S14, S15, S16, S17, S18, S19, S20
- Engineering discovery 1 (EECE Module*), GEEN-1200, F15, F16, F17, F18, F19
- Department colloquium, EECE-6952, F19, S20, F20

Dept. of Electrical Engineering, The State University of New York (SUNY) at Buffalo, Buffalo, NY

- Embedded systems with applications*, EE-379, S13
- HDL based digital design with programmable logic*, EE-478/578, F12

Dept. of Electrical and Computer Engineering, North Dakota State University (NDSU), Fargo, ND

- Digital design II*, ECE-470, F08, F09, F10, F11
- Advanced electronics, ECE-723, S09, S11
- System level design and automation*, ECE-777, S10, S12
- Circuit analysis I, EE-206, F10, F11
- Circuit analysis II, EE-311, S12

Dept. of Electrical and Computer Engineering, University of Minnesota, Twin Cities, MN

- *Teaching Assistant (TA)* for Digital design with programmable logic, EE-4301, F00, F02, F03
- *TA* for VLSI laboratory (EE-5327), S01
- *TA* for Statistical methods in electrical and computer engineering, EE-3025, S02
- *TA* for VLSI design automation I, EE-5301, F03

Grants – External

Summary: Total $2,607,918 ($2,527,041 at MU); $1,024,628 ($968,751 at MU) as PI

- National Science Foundation (NSF), SCC: Planning Grant: Safety and security of college campuses and their adjacent communities, PI: E. Yaz, Co-PIs: F. Josse, M. Hayat, **C. Ababei**, H. Medeiros, 10/1/2020 - 9/30/2021; **$150,000**
- National Science Foundation (NSF), REU Site: hardware, embedded software, and analytics for environment quality monitoring, PI: **C. Ababei**, Co-PI: M. Hayat, 5/1/2020 - 4/30/2023. **$376,717**
- National Science Foundation (NSF), ECCS, Collaborative Research: Crosslayer optimization of energy and cost through unified modeling of user behavior and storage in multiple buildings, Marquette University, PI: **C. Ababei**, University of Kentucky, PI: S. Silvestri, Co-PI: D.M. Ionel, 1/1/2020-12/31/2022. Marquette portion: $166,650. **$499,940**
- National Science Foundation (NSF), ADVANCE, Moving beyond boundaries to promote inclusive faculty success, PI: J. Hossenlopp, Co-PIs: J. Webster, W. Welburn, A. Schneider, **C. Ababei**, 1/1/2020 - 12/31/2022. **$1,000,000**
- FoxConn Smart Cities Smart Futures Competition, Outcomes prediction from biometrics and global pacemaker parameters, PI: J. Oujiri, Co-PIs: J. Rubenstein, R.J. Povinelli, and **C. Ababei**, Oct. 2018. **$500**
- National Science Foundation (NSF), CCF-1524909, SHF: Small: Uncertainty modeling and design methods for heterogeneous embedded systems, PI: **C. Ababei**, August 2015 - July 2018. **$251,068**
- Midwest Energy Research Consortium (M-WERC), Energy storage, demand response, and renewable energy interaction at building, campus, and district level, PI: D.M. Ionel, Co-PI(s): A. Nasiri, **C. Ababei ($25,000)**, Feb. 2014 - Feb. 2015. **$75,000**
- National Science Foundation (NSF), Travel grant to workshop for aspiring PIs in cyber-physical systems (CPS) research, **C. Ababei**; Jan. 2014. **$500**
- National Science Foundation (NSF), CCF-1116022, Lifetime reliability of systems-on-chip: unified modeling and dynamic reliability management, PI: **C. Ababei**, Sep. 2011 - Aug. 2014. **$229,193**
- John Deere, Power Electronics Lab. at North Dakota State University - Phase 2, PI(s): R. Kavasseri, S. Yuvarajan, Co-PI: **C. Ababei**, Jan. 2011 - Jan. 2012. **$25,000**

Grants – Internal, Travel, and Donations

Summary: Total $187,056 ($139,761 at MU); $113,002 ($65,707 at MU) as PI

- Intel FPGA Academic Program equipment donation, DE10-Standard FPGA development boards, 2020. **$700**
- OPUS College of Engineering, Marquette University, Summer Undergraduate Research Fellowship (SURF); Detection of vehicles and pedestrians using LiDAR technologies for intelligent transportation, PI: **C. Ababei**, May 2019 - Dec. 2019. **$5,000**
- OPUS College of Engineering, Marquette University, William and Nancy Stemper Scholar Development Award, Design and implementation of semi-autonomous underwater vehicle for water quality monitoring, PI: **C. Ababei**, Co-PIs: J.A. Fleischmann, R.A. Coutu, April 2018 - May 2019. **$20,000**
- OPUS College of Engineering, Marquette University, Legacy Initiative (LI) Grant Opportunities, Computer vision algorithms for tracking insects, PI: H. Medeiros, Co-PI: **C. Ababei**, June 2017 - May 2018. **$74,054**
- Altera equipment donation, DE1-SoC FPGA development boards, 2016. **$1,494**

- OPUS College of Engineering, Marquette University, Student Centered Learning Projects Program, Working on a start-up: a case for an applied entrepreneurship oriented course for senior undergraduates, PI: **C. Ababei**, Nov. 2015 - June 2016. **$1,800**
- Altera equipment donation, DE1-SoC FPGA development boards, 2015. **$1,743**
- OPUS College of Engineering, Marquette University, Student Centered Learning Projects Program, Emulating working in a company: a case for hands-on multiple projects oriented course for senior undergraduates, PI: **C. Ababei**, Nov. 2014 - June 2015. **$1,900**
- Marquette University, Faculty Development Award to support travel to IEEE SOCC Conference, Sep. 2-5, Las Vegas, NV, PI: **C. Ababei**, Sep. 2014. **$600**
- OPUS College of Engineering, Marquette University, GPU cluster for speeding-up computational methods in electronic design automation, power systems, voice and speech recognition, machine learning, data mining, and forecasting, PI(s): **C. Ababei**, M.T. Johnson, R.J. Povinelli, and R.H. Brown, Feb. 2014. **$20,000**
- Marquette University, Summer Faculty Fellowship (SFF) and Regular Research Grant (RRG), Hardware-software co-design for energy minimization of chip multiprocessors, PI: **C. Ababei**, Dec. 2014. **$9,500**
- Altera equipment donation, DE2-115 FPGA development boards, 2013. **$1,785**
- Xilinx equipment donation, Zed FPGA development boards, 2013. **$1,185**
- North Dakota State University Development Foundation, Enhancing NDSU courses with GPU-based computing, PI: **C. Ababei**, Jan. 2012 - Dec. 2012. **$36,000**
- Altera equipment donation, DE2-70 FPGA development boards, 2009. **$8,415**
- Xilinx equipment donation, Digilab-S3E FPGA development boards, 2009. **$1,380**
- North Dakota State University, Dept. of Electrical and Computer Engineering, Travel to conference, **C. Ababei**, Dec. 2009. **$500**
- North Dakota State University, Office of Research, Creative Activities and Technology Transfer, Travel to conference, **C. Ababei**, May 2009. **$500**
- North Dakota State University, Office of the President, Travel to conference, **C. Ababei**, Feb. 2009. **$1,000**

Professional Societies

- Senior member (SM) of Institute of Electrical and Electronics Engineers (IEEE), 2000 - present (SM as of 2014)
- Member of Association for Computing Machinery (ACM), 2001 - present
- Member of Special Interest Group on Design Automation (SIGDA), 2003 - present

Awards and Honors

- Electrical Engineering and Computer Engineering (EECE) Distinguished Researcher award, 2020
- Member of Eta Kappa Nu and Sigma Xi honor societies, 2014 - present
- Recognition Award, for outstanding technical contribution from Magma, 2007
- Recognition Award, for outstanding technical contribution to the NEC campaign from Magma, 2006
- Nomination for best paper award, Design Automation Conference, 2003
- TEMPUS Scholarship from the European Union, University of Patras, Greece, Sep. 1996 - June 1997
- Top 3 graduation, from Technical University "Gh. Asachi" of Iasi, Romania, 1996
- Second place, Mathematics Olympiad, Grade 12, Botosani, Romania, 1991

Graduate and Undergraduate Research Student Advising (Current)

Chair of Thesis and Dissertation Committee
Summary: 4 Ph.D. and 2 M.S. students

- Tim Radke (M.S., part-time), Sep. 2019 - present
- Yuqin (Oliver) Weng (Ph.D.), Sep. 2019 - present
- Chi Chen (M.S.), Sep. 2019 - present
- Alim Md Ahsan (Ph.D.), Sep. 2018 - present
- Wenkai Guan (Ph.D.), Sep. 2018 - present
- Shaun Duerr (Ph.D.), Sep. 2014 - present

Undergraduate Research Advisor (B.S.)
Summary: 2 students

- Jeremy Horky, S20 (FPGA, Research Assistant)
- Justin Ethithara, F19 (LiDAR, Research Assistant)

Graduate and Undergraduate Research Student Advising (Graduated)

Chair of Thesis and Dissertation Committee:
Summary: 2 Ph.D. and 9 M.S. students

Num.	Student	Degree	Year	University	First Job
11	Jinhua Zhang	M.S.	2020	MU	Foxconn Fii, Milwaukee, WI
10	Russell Marineau	M.S.	2018	MU	Centurion Invest., Brookfield, WI
9	Milad G. Moghaddam	Ph.D.	2018	MU	Cadence, San Jose, CA
8	Wenkai Guan	M.S.	2018	MU	Ph.D. student, Marquette
7	Kellen D. Carey	M.S.	2017	MU	Milwaukee Tool, Milwaukee, WI
6	Ian J. Barge	M.S.	2017	MU	Expedition Technology, Dulles, VA
5	Nathan Zimmerman	M.S.	2016	MU	Johnson Controls, Milwaukee, WI
4	Hamed Sajjadi Kia	Ph.D.	2014	NDSU	Medtronic, Minneapolis, MN
3	Alexandre Y. Yamamoto	M.S.	2014	NDSU	Ph.D. student, Texas A&M
2	Kianoosh Karami	M.S.	2011	NDSU	Start-up, Minneapolis, MN
1	Syed S. Ullah	M.S.	2011	NDSU	Cummins, Indianapolis, IN

Member of Thesis and Dissertation Committee:
Summary: 4 Ph.D. and 12 M.S. students

Num.	Student	Degree	Year	Advisor	University
16	Brian Stumph	M.S.	2019	Dr. Henry Medeiros	MU
15	Farhana Anwar	M.S.	2019	Dr. Ronald A. Coutu, Jr.	MU
14	Yevgeniy Reznichenko	M.S.	2018	Dr. Henry Medeiros	MU
13	Greg Merkel	M.S.	2017	Dr. Richard J. Povinelli	MU
12	Andres E. Guevara	M.S.	2016	Dr. Henry Medeiros	MU
11	Dan Schlifske	M.S.	2015	Dr. Henry Medeiros	MU
10	Jiangbiao He	Ph.D.	2015	Dr. Nabeel Demerdash	MU
9	Debjyoti Dwivedi	Ph.D.	2014	Dr. Srinivasan Sudarshan	NDSU
8	Rasool Aghatehrani	Ph.D.	2012	Dr. Rajesh Kavasseri	NDSU
7	Hohsen Hamidi	Ph.D.	2012	Dr. Kambiz Farahmand	NDSU
6	Eshita Ahmed	M.S.	2012	Dr. Subbaraya Yuvarajan	NDSU
5	Akshaya Mohan	M.S.	2012	Dr. Srinivasan Sudarshan	NDSU
4	Anushree Sharma	M.S.	2011	Dr. Rajesh Kavasseri	NDSU
3	Sunil Kolluru	M.S.	2011	Dr. Kendall Nygard	NDSU
2	Koushik Sarker	M.S.	2010	Dr. Srinivasan Sudarshan	NDSU
1	Munir Kanderbai	M.S.	2010	Dr. Subbaraya Yuvarajan	NDSU

Undergraduate Research Advisor (B.S.)
Summary: 7 students at MU, 2 students at NDSU

- Raaz Khoshnood, Su19-F19, MU, (SURF, Research Assistant)
- Mitchell Shreiner, F18-F19, MU, (William and Nancy Stemper Scholar, Research Assistant)
- Grace Grad, S19, MU, (Research Assistant)
- Max Marischen, S18-F18, MU, (Research Assistant)
- Momammad Assad, S18-F18, MU, (William and Nancy Stemper Scholar, Research Assistant)
- Brandon Kupczyk, F17-S18, MU, (SURF, Research Assistant)
- Kyle Duckworth, S15-F15, MU, (NSF, Research Assistant)
- Vitor de Paulo, S09, NDSU, (Research Assistant)
- Alexandre Yasuo Yamamoto, S09 NDSU, (Research Assistant)

Senior Design Project Advisor (B.S.)
Summary: 7 teams at MU, 6 teams at NDSU

- John Kahmann, David Keane, Nicholas Gardetto, Matthew Petter, Cheng Yuan, Xingjian Zhao, IoT Device for Home Automation, MU, F19-S20
- Brendan Higgins, Charlie Kash, Andrew Laurita, Patrick Toennies, Voice Control of Scopes, MU, F19-S20
- Kevin Etta, Caroline Gilger, Andrew Maatman, Tuoxuan (Ray) Ren, Logan Wedel, LED Electronic Display, MU, F18-S19
- Kelsey Conley, Jon D'Souza, Alex Foyer, Patrick Hara, Tom Janik, Jason Reichard, Vibration Bracelet, MU, F18-S19
- Rodolfo Moschioni, Bryan Troup, Alex Billies, Mackenzie Jonkman, Connor Conzelman, and Kenny Krueger, Design of a solar powered vehicle, MU, F16-S17
- Curtis Bader, Peter Irgens, Theresa Le, and Devansh Saxena, Face detection on FPGAs, MU, F15-S16
- Jose Gonzalez and Zayed Al Falasi, Designing and prototyping a tri-copter drone, MU, S14
- Thomas Haselhorst, Derek Wiseman, Whitney Conmy, and Layne Berge, Wireless camera presenter tracking system, NDSU, F11-S12
- Thomas Conlin, Sharan Ghimire, and Bibek Bhattarai, FPGA assisted control of the direct torque of induction motor drives, NDSU, F10-S11
- Davis Beattie, Stephen Farnsworth, and Mohammed Albalawi, Wireless glove for sign-to-speech or gaming applications, NDSU, S10-F10
- Kody Olmstead and Felicity Lunden, A greener campus by energy consumption surveillance, NDSU, S10-F10
- Scott Barber, Matthew Bruns, and Jake Arntson, Balance monitoring and alerting system for elderly, NDSU, F09-S10
- Swati Gupta, Matthew Nitschke, and Richard Schultz, FPGA based hardware accelerator for power flow solvers, NDSU, F09-S10

Achievements of Students

- November 2020, Wenkai Guan: Jump Start Award in the Forward Thinking Virtual Poster Session 2020 at Marquette University.
- April 2019, Kelsey Conley, Alex Foyer, Patrick Hara, Tom Janik, Jason Reichard, and Jon D'Souza: 1st place at 2019 Larry Hause Poster Competition of the IEEE Milwaukee Section, in the category Undergraduate Research Projects and Senior Design Projects for their poster presentation titled Vibrating Alert Bracelet.
- March 2017, Milad Ghorbani Moghaddam: Best research assistant award in the EECE department.
- May 2016, Nathan Zimmerman: 1st place at 2016 Larry Hause Poster Competition of the IEEE Milwaukee Section, in the category Graduate: Masters Thesis and Ph.D. Dissertation Work. Poster on MarqDrone quadcopter.

- April 2016, Milad Ghorbani Moghaddam: 1st place at 2016 Sigma Xi Poster Competition, Marquette University, Electrical and Computer Engineering (ECE) Section. Poster on full-system simulation of Network-on-Chip based H.264 video decoders.
- May 2015, Nathan Zimmerman: 1st place at 2015 Larry Hause Poster Competition of the IEEE Milwaukee Section, in the category Graduate: Masters Thesis and Ph.D. Dissertation Work. Poster on electronic speed controllers for quadcopters.

Professional Service

Service to the Department

- Search committee member for faculty opening on network security in Electrical and Computer Engineering, 2019-2020.
- Director of Computer Engineering Laboratories, Fall 2019-present
- Organizer of the EECE Colloquium Series, Summer 2019-present
- Laboratory/Software committee, Fall 2018-present
- Graduate program assessment, Spring 2018-present
- Search committee member for department chair in Electrical and Computer Engineering, 2017-2018.
- Search committee member for faculty opening on big data in Electrical and Computer Engineering, 2017-2018.
- Committee member, Electrical and Computer Engineering Graduate Committee, Fall 2016-present.
- Committee member, Electrical and Computer Engineering Undergraduate Committee, Fall 2013-present.
- Co-teaching with Dr. S.C. Schneider the electrical engineering and computer engineering (EECE) module in Engineering discovery 1 (GEEN-1200), 2015-2019.
- Marquette University, Advising an average of 35 undergraduate students each year, 2013-present.
- NDSU, Dept. of ECE, Search committee member for two faculty openings (Fall 2009 and Spring 2010), chair of the search committee for one faculty opening (Fall 2011), and search committee member for dept. chair opening (Fall 2011).
- NDSU, Dept. of ECE, Committee member, Annual evaluation of the chair of the ECE department committee, Spring 2009.
- NDSU, Dept. of ECE, Committee member, Comprehensive exam for doctoral candidates committee, 2009-2012.
- NDSU, Dept. of ECE, Advised an average of 30 undergraduate students each year, 2008-2012.

Service to the College

- Women's Engineering Leadership Academy (WELA), OPUS College of Engineering, Summer 2019. Lecture and lab with Arduino and LEDs art.
- Engineering Leadership Academies (ELA), OPUS College of Engineering, Summer 2019. Lecture and lab with Arduino and LEDs art.
- OPUS College of Engineering Discovery Day, Fall 2018. Presented projects on edge detection on FPGAs, self-balancing robot, and auto-leveling quadcopter.
- OPUS College of Engineering Open House, Spring 2015-2017. Presented projects on digital camera on FPGAs, edge detection on FPGAs, WiFi and Android app development, and drone control with WII NunChucks.
- Search committee member for hiring new Director of Enrollment Management in OPUS College of Engineering, Spring 2016.
- Served as faculty judge in the Engineering Hackaton, Jan. 2016.
- Search committee member for hiring IT person in OPUS College of Engineering, Spring 2014, Fall 2014.

Service to the University

- ADVANCE Program team member, Marquette University, Fall 2019-present.
- Committee member, Internal advisory for NSF's ADVANCE adaptation program, Marquette University, Fall 2017-2019.
- Committee member, High Performance Computing (HPC) Governance Committee, Marquette University, Fall 2016-2019.
- Advocate of NDSU Advance FORWARD (Focus on Resources for Women's Advancement, Recruitment/Retention, and Development), NDSU, 2011-2012.

Service to the Professional Community

- Guest editor with R.J. Povinelli and H. Medeiros, Special Issue "Application of Machine Learning and Data Mining in Electrical Engineering", MDPI, energies, 2018-2019.
- Guest editor with R.J. Povinelli and H. Medeiros, Special Issue "Intelligent Sensors Based on Artificial Neural Network", MDPI, sensors, 2020-2021.
- Member of the editorial board: International Journal of Reconfigurable Computing, 2011-2017
- Track chair for IEEE Int. Symposium on Embedded Multicore/Many-core Systems-on-Chip (MCSoC-20), 2020.
- Track chair for IEEE Asia-Pacific Conference on Circuits and Systems (APCCAS), 2020.
- Track chair for IEEE Int. Symposium on Embedded Multicore/Many-core Systems-on-Chip (MCSOC), 2020.
- Track chair for IEEE Int. System-on-Chip Conference (SOCC), 2016-2019.
- Technical program committee member for ACM/SIGDA Ph.D. Forum at ACM/IEEE Design Automation Conference (DAC), 2005-present.
- Technical program committee member for Symposium on VLSI Design and Embedded Computing (VDEC), 2019-present.
- Technical program committee member for IEEE Int. Conference on Reconfigurable Computing and FPGAs (ReConFig), 2012-present.
- Technical program committee member for ACM/IEEE Int. Symposium on Networks-on-Chip (NOCS), 2016-present.
- Technical program committee member for ACM Int. Green and Sustainable Computing Conference (IGSC), 2015-present.
- Technical program committee member for IEEE Int. Conference on Electro Information Technology (EIT), 2016-2019.
- Technical program committee member for IEEE Int. Symposium on Embedded Multicore/Many-core Systems-on-Chip (MCSOC), 2015, 2016, 2019, 2020.
- Technical program committee member for ACM Int. Conference on Parallel Processing (ICPP), 2015.
- Technical program committee member for Int. Workshop on Advances in VLSI Circuit Design and CAD Tools (AVCDCT), 2014.
- Proposal reviewer and panelist for the National Science Foundation (NSF), F11, S12, S13, S14, S16, S19, S20.
- Proposal reviewer for the Natural Sciences and Engineering Research Council (NSERC) of Canada, 2012-present.
- Reviewer for journals and magazines
  - IEEE Trans. on Computer-Aided Design of Integrated Circuits and Systems (TCAD)
  - IEEE Trans. on Very Large Scale Integration Systems (TVLSI)
  - IEEE Trans. on Computers (TC)
  - IEEE Trans. in Circuits and Systems II (TCAS II)
  - IEEE Trans. on Multi-Scale Computing Systems

  - IEEE Micro
  - IEEE Potentials
  - IEEE Embedded Systems Letters
  - IEEE Trans. on Power Systems
  - IEEE Trans. on Power Delivery
  - ACM Trans. on Design Automation of Electronic Systems (TODAES)
  - ACM Journal on Emerging Technologies in Computing Systems (JETCS)
  - Elsevier, Microprocessors and Microsystems
  - Elsevier, Sustainable Computing, Informatics and Systems
  - Elsevier Integration, the VLSI Journal
  - Elsevier, Journal of Parallel and Distributed Computing
  - Elsevier, Microelectronics Journal
  - Elsevier, the Journal of the International Measurement
  - Elsevier, Applied Energy
  - Journal of Circuits, Systems, and Computers (JCSC)
- Reviewer for conferences
  - ACM/IEEE Design Automation Conference (DAC)
  - IEEE Int. Conference on Reconfigurable Computing and FPGAs (ReConFig)
  - ACM/IEEE Int. Symposium on Networks-on-Chip (NOCS)
  - IEEE Int. Conference on Electro Information Technology (EIT)
  - ACM/IEEE Int. Green and Sustainable Computing Conference (IGSC)
  - IEEE Int. Symposium on Embedded Multicore/Many-core Systems-on-Chip (MCSSOC)
  - ACM Int. Conference on Parallel Processing (ICPP)
  - IEEE Int. Symposium on Circuits and Systems (ISCAS)
  - IEEE Energy Conversion Congress and Exposition (ECCE)
  - IEEE Frontiers in Education (FIE)
  - ASEE Zone 3 Conference
  - ASEE North Midwest Section Conference
- Software and Hardware Public Release

  All software programs can also be downloaded from Github: `https://github.com/eigenpi`
  - Software programs developed as part of research projects have been released publicly for outreach to the professional community. These programs can be downloaded from: `http://dejazzer.com/software.html`
  - Hardware designs developed as part of research projects and courses development have been released publicly for outreach to the professional and educational communities. Source files and documentation of these designs can be downloaded from: `http://dejazzer.com/hardware.html`
  - Release and maintenance of REpository of Distribution Systems (REDS) - a suite of testcases for power distribution systems research, PIs: **C. Ababei** of MU and R. Kavasseri of NDSU. Website: `http://dejazzer.com/reds.html`
  - Created the Network-on-Chip professional blog: `https://networkonchip.wordpress.com`, which is visited by an average of 50 or more visitors per day.

Outreach Educational Activities

- WE-GIRLS Summer Camp, 4th edition, participation of ten girls grades 6-8, Milwaukee, WI, June 2017.
- WE-GIRLS Summer Camp, 3rd edition, participation of eleven girls grades 6-8, Milwaukee, WI, June 2016.
- WE-GIRLS Summer Camp, 2nd edition, participation of six girls grades 6-8, Milwaukee, WI, June 2015.
- WE-GIRLS Summer Camp, 1st edition, participation of six girls grades 6-8, Fargo, ND, July 2012.