



# Aatmesh Shrivastava

*Curriculum Vitæ (January 16, 2021)*

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*Website*          <https://web.northeastern.edu/ecl/>

## APPOINTMENTS

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- Assistant Professor** 2016-  
*Northeastern University, Boston*
- Research: Ultra-low Power Circuits and Systems, Precision Circuits, Hardware for Machine-learning, IoT, Interconnects, Hardware-Security.
  - Teaching: Circuits and Signals, Electronics-II, Power Management Integrated Circuits (PMIC)
- Sr. Design Director** 2014-2016  
*Everactive, Charlottesville*
- Research: Self-powered Wake-up Radio
- Sr. Design Engineer** 2009-2010  
*Texas Instruments, Bangalore*
- Research on high frequency interconnects, Oscillators
- Design Engineer** 2006-2009  
*Texas Instruments, Bangalore*
- Research on high frequency interconnects, Oscillators

## EDUCATION

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- PhD Electrical Engineering** 2010-2014  
*The University of Virginia, Charlottesville*  
“Mixed Signal Platform Circuits for Ultra Low Power Systems”  
Thesis advisor: Benton H. Calhoun  
–Visiting Scholar, *MIT 2012-2013*
- BE Electronics and Communication Engineering** 2002-2006  
*Birla Institute of Technology, MESRA, Ranchi*  
Academic/Research advisors: Sukesh Kumar

## JOURNAL ARTICLES [\[statistics\]](#)

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15. N. Mirchandani, Y. Zhang, S. Abdelfattah, M. Onabajo, and [A. Shrivastava](#), “System-Level Modeling and Simulation of Nonidealities in Analog Computing Circuits for Seizure Detection”, *IEEE Transactions on Biomedical Circuits and Systems*, (Under Review). [IF 4.04]
14. D. Das, M. Nasrollahpour, Z. Xu, M. Zaeimbashi, I. Martos-Repath, A. Mittal, A. Khalifa [A. Shrivastava](#), N. X. Sun, and M. Onabajo, “[A Prototyping Platform for Magnetolectric Antennas: Sensing, Energy Harvesting](#)”, *MDPI-Electronics* **9**, 2123 (2020). [IF 2.4]
13. M. Zaeimbashi, M. Nasrollahpour, A. Khalifa, A. Romano, X. Liang, H. Chen, N. Sun, A. Matyushov, H. Lin, C. Dong, Z. Xu, A. Mittal, I. Martos-Repath, G. Jha, N. Mirchandani, D. Das, M. Onabajo, [A. Shrivastava](#), S. Cash, and N. X. Sun, “Ultra compact Dual-band Hybrid NEMS Magnetolectric (ME) Antennas for Simultaneous Wireless Energy Harvesting and Magnetic Field Sensing”, *Nature Communications*, (Under Review). [IF 12.12]
12. T. Yang, A. Mittal, Y. Fei, and [A. Shrivastava](#), “[Large Delay Analog Trojans: A Silent Fabrication-Time Attack Exploiting Analog Modalities](#)”, *IEEE Transactions on Very Large Scale Integration Systems* **Vol: 29, Issue:1**, pgs-124–135 (Jan-2021).[IF 2.03]
11. D. T. O’Brien, B. Gridley, A. Trlica, J. Wang, [A. Shrivastava](#), “[Urban heat islets: Street segments with higher land surface temperatures experience a greater increase in medical emergencies during heat advisories](#)”, *American Journal on Public Health* **Accepted for Publication**, (To Appear in 2020). [IF 5.3]
10. N. Zaeimbashi, H. Lin, C. Dong, X. Liang, M. Nasrollahpour, N. Sun, A. Matyushov, Y. He, X. Wang, C. Tu, Y. Wei, Y. Zhang, S. Cash, M. Onabajo, [A. Shrivastava](#), and N. X. Sun, “[NanoNeuroRFID: A Wireless Implantable Device Based on Magnetolectric Antennas](#)”, *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology* **Vol: 3, Issue:3**, pgs-206-215 (Sept. 2019).
9. N. Shafiee, S. Tewari, B. H. Calhoun and [A. Shrivastava](#), “[Infrastructure Circuits for Lifetime Improvement of Ultra-Low Power IoT Devices](#)”, *IEEE Transactions on Circuits and Systems-I (TCAS-I)*. **Vol: 64, Issue:9**, pgs-2598–2610 (Sept-2017).
8. D. Akella Kamakshi, [A. Shrivastava](#), and B. H. Calhoun, “[A 0.2 V, 23 nW CMOS Temperature Sensor for Ultra-Low-Power IoT Applications](#)”, *Journal of Low Power Electronics and Applications, (JLPEA)*. **Vol: 6, Issue:2**, pgs-1–16 (June-2016).
7. D. Akella Kamakshi, [A. Shrivastava](#), C. Duan and B. H. Calhoun, “[A 36 nW 7 ppm/°C on-Chip Clock Source Platform for Near-Human-Body Temperature Applications](#)”, *Journal of Low Power Electronics and Applications, (JLPEA)*. **Vol: 6, Issue:2**, pgs-1–20 (May-2016).
6. [A. Shrivastava](#), D. Akella Kamakshi, and B. H. Calhoun, “[A 1.5nW, 32.768kHz XTAL Oscillator Operational from 0.3V Supply](#)”, *IEEE Journal on Solid-State Circuits, (JSSC)*. **Vol: 51, Issue:3**, pgs-686–696 (Mar-2016).
5. Y. Huang, [A. Shrivastava](#), and B. H. Calhoun, “[A Design and Theoretical Analysis of a 145mV to 1.2V Single-Ended Level Converter Circuit for Ultra-Low Power Low Voltage ICs](#)”, *Journal of Low Power Electronics and Applications, (JLPEA)*. **Vol: 6, Issue:3**, pgs-1–14 (June-2016).

4. [A. Shrivastava](#), N. E. Roberts, O. U. Khan, D. D. Wentzloff, and B. H. Calhoun, “A 10mV-Input Boost Converter with Inductor Peak Current Control and Zero Detection for Thermoelectric and Solar Energy Harvesting with 220mV Cold-Start and -14.5dBm, 915MHz RF Kick-Start”, *IEEE Journal on Solid-State Circuits, (JSSC)*. **Vol: 50, Issue:8**, pgs-1820–1832 (Aug-2016).
3. A. Roy, A. Klinefelter, F. B. Yahya, X. Chen, P. Gonzalez, D. Akella, J. Boley, K. Craig, M. Faisal, S. Oh, N. E. Roberts, Y. Shakhsher, [A. Shrivastava](#), D. Vasudevan, D. D. Wentzloff, and B. H. Calhoun, “A 6.45 $\mu$ W Self-Powered SoC with Integrated Energy-Harvesting Power Management and ULP Asymmetric Radios for Portable Biomedical Systems”, *IEEE Transactions on Biomedical Circuits and Systems (TBioCAS)*. **Vol: 9, Issue:9**, pgs-862–874 (Dec-2015).
2. [A. Shrivastava](#), and B. Calhoun, “A DC-DC Converter Efficiency Model for System Level Analysis in Ultra Low Power Applications”, *Journal of Low Power Electronics and Applications, (JLPEA)*. **Vol: 3, Issue:3**, pgs-1–18 (June-2013).
1. Y. Zhang, F. Zhang, Y. Shakhsher, J. D. Silver, A. Klinefelter, M. Nagaraju, J. Boley, J. Pandey, [A. Shrivastava](#), E. J Carlson, A. Wood, B. H Calhoun, and B. P Otis, “A Batteryless 19 $\mu$ W MICS/ISM-Band Energy Harvesting Body Sensor Node SoC for ExG Applications”, *IEEE Journal on Solid-State Circuits, (JSSC)*. **Vol: 48, Issue:1**, pgs-1820–1832 (Jan-2013).

## BOOK CHAPTER

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- S. Tewari [A. Shrivastava](#), “Ultra-low Power Charge-Pump-Based Bandgap References”, in Hybrid ADCs, Smart Sensors for the IoT, and Sub-1V and Advanced Node Analog Circuit Design (Springer, 2018).

## CONFERENCE PROCEEDINGS [\[statistics\]](#)

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25. A. Baig, A. Barbeillini, Y. Zhang, N. Mirchandani and [A. Shrivastava](#), “Seizure Detection in Epilepsy Patients Using Machine Learning Algorithms”, *2020 IEEE MIT Undergraduate Research Technology Conference* , (Oct-2020, Cambridge, MA).(Accepted for publication) Acceptance Rate : 50%
24. A. Sinha, and [A. Shrivastava](#), “Exploring Post Quantum Analog Encryption”, *2020 IEEE MIT Undergraduate Research Technology Conference* , (Oct-2020, Cambridge, MA).(Accepted for publication) Acceptance Rate : 50%
23. Y. Zhang, N. Mirchandani, M. Onabajo, and [A. Shrivastava](#), “RSSI Amplifier Design for a Feature Extraction Technique to Detect Seizures with Analog Computing”, *2020 IEEE International Symposium on Circuits and Systems (ISCAS)* , (Oct-2020, Seville, Spain).(Accepted for publication) Acceptance Rate : 53%
22. Z. Xu, N. Mirchandani, M. A. A. Ibrahim, M. Onabajo, and [A. Shrivastava](#), “A High Efficiency DC-DC Converter Architecture with Adjustable Switching Frequency to Suppress Noise Injection in RF Receiver Front-Ends”, *2020 IEEE International Symposium on Circuits and Systems (ISCAS)* , (Oct-2020, Seville, Spain).(Accepted for publication) Acceptance Rate : 53%

21. N. Mirchandani, N. Shafiee, Y. Fei, and A. Shrivastava, "An Ultra-low Power and Lower Area Current-Mode based Physically Unclonable Function with less than 100nW Power Consumption and a Native Instability of 0.6875% for IoT Applications", *2020 IEEE IMidwest Symposium on Circuits and Systems (MWSCAS)*, (August-2020, Springfield, MA). Acceptance Rate : 75%
20. I. Martos-Repath, A. Mittal, M. Zaeimbashi, D. Das, N. X. Sun, A. Shrivastava, and M. Onabajo, "Modeling of Magnetoelectric Antennas for Circuit Simulations in Magnetic Sensing Applications", *2020 IEEE IMidwest Symposium on Circuits and Systems (MWSCAS)*, (August-2020, Springfield, MA). Acceptance Rate : 75%
19. S. Abdelfattah, A. Shrivastava, and M. Onabajo, "A Chopper Instrumentation Amplifier with Fully Symmetric Negative Capacitance Generation Feedback Loop and Online Digital Calibration for Input Impedance Boosting", *2019 IEEE Mid-West Symposium on Circuits and Systems (MWSCAS)*, (August-2019, Dallas, Tx).
18. N. Mirchandani and A. Shrivastava, "CMOS based Ultra-low Power High-Precision Analog Vector Matrix Multiplication Circuit with 0.1% Error for Vision Application", *2019 IEEE Mid-West Symposium on Circuits and Systems (MWSCAS)*, (August-2019, Dallas, Tx).
17. N. Mirchandani and A. Shrivastava, "High Stability Gain Structure and Filter Realization with less than 50 ppm/°C Temperature Variation with Ultra-low Power Consumption using Switched-capacitor and Sub-threshold Biasing", *2018 IEEE International Symposium on Circuits and Systems (ISCAS)*, (May-2018, Florence, Italy).
16. M. A. A. Ibrahim, N. Mirchandani, N. Shafiee, M. Onabajo and A. Shrivastava, "Study of Performance Impact from Powering RF Receiver Front-End Circuits with a DC-DC Converter", *2018 IEEE International Symposium on Circuits and Systems (ISCAS)*, (May-2018, Florence, Italy).
15. N. E. Roberts, K. Craig, A. Shrivastava, S. Wooters, Y. Shaksheer, D. Wentzloff, and B. H. Calhoun, "A 236nW -56.5dBm Sensitivity Bluetooth Low-Energy Wakeup Receiver with Energy Harvesting in 65nm CMOS", *2016 IEEE International Solid-State Circuits Conference (ISSCC)*, (Feb-2016, San Fransisco, CA).
14. Y. Huang, A. Shrivastava, and B. H. Calhoun, "A 145mV to 1.2V Single Ended Level Converter Circuit for Ultra-Low Power Low Voltage ICs", *2015 SOI-3D-Subthreshold Microelectronics Technology Unified Conference (S3S)*, (Sept-2015, Monterey, CA).
13. D. Akella, A. Shrivastava, and B. H. Calhoun, "A 23 nW, All-CMOS Ultra-Low Power Temperature Sensor Operational from 0.2 V", *2015 SOI-3D-Subthreshold Microelectronics Technology Unified Conference (S3S)*, (Sept-2015, Monterey, CA).
12. Y. Shaksheer, A. Shrivastava, N. Roberts, K. Craig, S. Wooters, D. D. Wentzloff, and B. H. Calhoun, "Ultra Low Power Circuits and Systems for Self-Powered Wireless Sensors", *2015 Government Microcircuits Applications and Critical Technology Conference (GOMACTech)*, (Mar-2015, St. Louis, MO).
11. A. Shrivastava, K. Craig, N. E. Roberts, D. Wentzloff, and B. H. Calhoun, "A 32nW Bandgap Reference Voltage Operational from 0.5V Supply for Ultra-low Power Systems", *2015 IEEE International Solid-State Circuits Conference (ISSCC)*, (Feb-2015, San Fransisco, CA).

10. A. Klinefelter, N. E. Roberts, Y. Shakhsheer, P. Gonzalez, A. Shrivastava, A. Roy, K. Craig, M. Faisal, J. Boley, S. Oh, Y. Zhang, D. Akella, D. Wentzloff, B.H. Calhoun, “[A 6.45 \$\mu\$ W Self-Powered IoT SoC with Integrated Energy-Harvesting Power Management and ULP Asymmetric Radios](#)”, *2015 IEEE International Solid-State Circuits Conference (ISSCC)* , (Feb-2015, San Fransisco, CA).
9. A. Shrivastava, D. Wentzloff, and B. H. Calhoun, “[A 10mV-Input Boost Converter with Inductor Peak Current Control and Zero Detection for Thermoelectric Energy Harvesting](#)”, *2014 IEEE Custom Integrated Circuits Conference (CICC)* , (Sept-2014, San Jose, CA).
8. A. Shrivastava, Y. K. Ramadass, S. Khanna, S. Bartling, and B. H. Calhoun, “[A 1.2 \$\mu\$ W SIMO Energy Harvesting and Power Management Unit with Constant Peak Inductor Current Control Achieving 84-92% Efficiency Across Wide Input and Output Voltages](#)”, *2014 IEEE Symposium on VLSI Circuits (VLSI symp.)* , (June-2014, Honolulu, HI).
7. A. Shrivastava, J. Pandey, B. Otis, and B. H. Calhoun, “[A 50nW, 100kbps Clock/Data Recovery Circuit in an FSK RF Receiver on a Body Sensor Node](#)”, *2013 IEEE International Conference on VLSI Design Conference 2013* , (Jan-2013, Pune, India).
6. A. Shrivastava, Y. K. Ramadass, S. Bartling, and B. H. Calhoun, “Single Inductor Energy Harvesting and Power Management Circuit for Body Sensor Nodes”, *2013 IEEE International Solid-State Circuits Conference Student Research Preview (ISSCC-SRP)* , (Feb-2013, San Fransisco, CA).
5. A. Shrivastava, and B. H. Calhoun, “[A 150nW, 5ppm/ \$^{\circ}\$ C, 100kHz On-Chip Clock Source for Ultra Low Power SoCs](#)”, *2012 IEEE Custom Integrated Circuits Conference (CICC)* , (Sept-2012, San Jose, CA).
4. A. Shrivastava, and B. H. Calhoun, “[A Charge Pump Based Receiver Circuit for a Voltage Scaled Interconnect](#)”, *2012 IEEE International Symposium on Low Power Electronics Design (ISLPED)* , (July-2012, Los Angles, CA).
3. A. Shrivastava, and B. H. Calhoun, “[Modeling DC-DC Converter Efficiency and Power Management in Ultra Low Power Systems](#)”, *2012 IEEE Sub-threshold Conference (Sub-Vt)* , (Sept-2012, Waltham, MA).
2. F. Zhang, Y. Zhang, J. Silver, Y. Shakhsheer, M. Nagaraju, A. Klinefelter, J. Pandey, J. Boley, E. Carlson, A. Shrivastava, B. Otis, B. H. Calhoun, “[A Batteryless 19 \$\mu\$ W MICS/ISM-Band Energy Harvesting Body Area Sensor Node SoC](#)”, *2012 IEEE International Solid-State Circuits Conference (ISSCC)* , (Feb-2012, San Fransisco, CA).
1. K. Rajagopal, A. Shrivastava, V. Menezes, “[An enhanced topology for reliability of a High Performance 3.3V IO in a single well CMOS 1.8v-oxide Low voltage Process](#)”, *2009 IEEE International Symposium on Quality Electronics Design (ISQED)* , (Mar-2009, San Jose, CA).

## GRANTED US PATENTS

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18. B. H. Calhoun and A. Shrivastava, “Methods and apparatus for a single inductor multiple output (SIMO) DC-DC converter circuit”, **US- 10,170,990** (*Granted on Jan 1, 2019*)

17. B. H. Calhoun and A. Shrivastava, “Low power clock source”, **US-9,998,124** (*Granted on June 12, 2018*).
16. B. H. Calhoun and A. Shrivastava, “Low voltage crystal oscillator (XTAL) driver with feedback controlled duty cycling for ultra low power”, **US- 9,979,348** (*Granted on May 22, 2018*).
15. B. H. Calhoun and A. Shrivastava, “Low input voltage boost converter with peak inductor current control and offset compensated zero detection”, **US- 9,973,086** (*Granted on May 15, 2018*).
14. B. H. Calhoun and A. Shrivastava, “Low voltage crystal oscillator (XTAL) driver with feedback controlled duty cycling for ultra low power”, **US- 9,941,838**. (*Granted on April 10, 2018*).
13. A. Shrivastava, “Methods and apparatus for low input voltage bandgap reference architecture and circuits”, **US- 9,857,813**. (*Granted on January 2, 2018*).
12. B. H. Calhoun and A. Shrivastava, “Low input voltage boost converter with peak inductor current control and offset compensated zero detection”, **US- 9,812,965** (*Granted on November 7, 2017*).
11. A. Shrivastava, Y. K. Ramadass, S. Bartling “Single inductor multiple output discontinuous mode DC-DC converter and process”, **US- 9,746,868**. (*Granted on August 29, 2017*).
10. B. H. Calhoun and A. Shrivastava, “Methods and apparatus for a single inductor multiple output (SIMO) DC-DC converter circuit”, **US- 9,698,685** (*Granted on July 4, 2017*).
9. B. H. Calhoun and A. Shrivastava, “Low power clock source”, **US-9,590,638** (*Granted on March 7, 2017*).
8. B. H. Calhoun and A. Shrivastava, “Low input voltage boost converter with peak inductor current control and offset compensated zero detection”, **US- 9,490,698** (*Granted on November 8, 2016*).
7. B. H. Calhoun and A. Shrivastava, “Low voltage crystal oscillator (XTAL) driver with feedback controlled duty cycling for ultra low power”, **US- US-9,350,294**. (*Granted on May 24, 2016*).
6. B. H. Calhoun and A. Shrivastava, “Low input voltage boost converter with peak inductor current control and offset compensated zero detection”, **US- 9,325,240** (*Granted on April 26, 2016*).
5. A. Shrivastava, “Methods and apparatus for low input voltage bandgap reference architecture and circuits”, **US- 9,158,320**. (*Granted on October 13, 2015*).
4. A. Shrivastava, Y. K. Ramadass “Methods and apparatus for low input voltage bandgap reference architecture and circuits”, **US- 9,158,320**. (*Granted on October 20, 2015*).
3. A. Shrivastava, and R. Yadav “Pulse generation circuits in integrated circuits”, **US- 8,797,072**. (*Granted on August 5, 2015*).
2. A. Shrivastava, and R. Yadav “Power on reset generation circuits in integrated circuits”, **US- 8,680,901**. (*Granted on March 25, 2015*).
1. A. Shrivastava, R. Yadav, and P. K. Rana “Fast start-up crystal oscillator”, **US- 8,120,439**. (*Granted on Feb 21, 2012*).

## INVITED TALKS

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10. Chip Design for Ultra-low Power Sensors , IIT-Delhi 2020, New-Delhi, India 11/20
9. Ultra-low Power SoC Design Strategies, Qualcomm, Boxborough,MA 2/19
8. Lifetime Improvement of Ultra-low Power IoT Devices, EtCMOS 2018, Whistler, Canada 5/18
7. State of the Art Energy Harvesting for IoT, EtCMOS, 2017, Seoul, Korea 10/17
6. IoT Tech Talk Series, Google, Mountainview, CA 04/17
5. Seminar on Ultra-low Power Circuit, Columbia University, NY, 03/17
4. Design of Charge-pump based Bandgap Reference, AACD Workshop 2017, Eindhoven, Netherlands 3/17
3. The University of Virginia, Charlottesville, 3/14
2. Dayalbagh Educational Institute, Agra, India, 3/14
1. Power Management and Power Delivery for Energy Efficient Circuit and System Design, Maxim Integrated, Chelmsford, 3/13

## HONORS AND AWARDS

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- 2013 Charles L. Brown Graduate Fellowship for Excellence, Electrical Engineering, The University of Virginia.
- 2013 Louis T. Rader Graduate Research Award, Electrical Engineering, The University of Virginia.
- 2013 Paul Voigt Graduate Teaching Fellowship, School of Engineering and Applied Sciences, The University of Virginia.
- 2013 International Solid State Circuits Conference Student Research Preview, ISSCC-SRP.

## CONFERENCE PARTICIPATION

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### Papers Presented

- “High Stability Gain Structure and Filter Realization with less than 50 ppm/° C Temperature Variation with Ultra-low Power Consumption using Switched-capacitor and Sub-threshold Biasing” *International Symposium on Circuits and Systems (ISCAS)*, Florence, Italy, May-2018.
- “Lifetime Improvement of Ultra-low Power IoT Devices” *International Symposium on Circuits and Systems (ISCAS)*, Florence, Italy, May-2018.
- “A 32nW Bandgap Reference Voltage Operational from 0.5V Supply for Ultra-low Power Systems,” *IEEE Solid-State Circuits Conference (ISSCC)*, San Fransisco, Feb-2015.

- “A 10mV-Input Boost Converter with Inductor Peak Current Control and Zero Detection for Thermoelectric Energy Harvesting” *IEEE Custom Integrated Circuits Conference (CICC)*, San Jose, Sep-2014.
- “A 1.2 $\mu$ W SIMO Energy Harvesting and Power Management Unit with Constant Peak Inductor Current Control Achieving 84-92% Efficiency Across Wide Input and Output Voltages,” *IEEE Symposium on VLSI Circuits (VLSI Symp.)*, Honolulu, July-2014.
- “A 50nW, 100kbps Clock/Data Recovery Circuit in an FSK RF Receiver on a Body Sensor Node,” *IEEE International Conference on VLSI Design Conference*, Pune, India, Mar-2103.
- “Single Inductor Energy Harvesting and Power Management Circuit for Body Sensor Nodes” *IEEE Solid State Circuits Conference (ISSCC) Student Research Preview (SRP)*, San Fransisco, Feb -2013.
- ”A 150nW, 5ppm/oC, 100kHz On-Chip Clock Source for Ultra Low Power SoCs”, *IEEE Custom Integrated Circuits Conference (CICC)*, San Jose, Sept-2012.
- “A Charge Pump Based Receiver Circuit for a Voltage Scaled Interconnect” *IEEE International Symposium on Low Power Electronics and Design (ISLPED)*, Redondo Beach, Aug-2012.
- “Modeling DC-DC Converter Efficiency and Power Management in Ultra Low Power Systems,” *IEEE Sub-Threshold Conference (Sub-vt)*, Sept-2012.
- “A sub-threshold clock and data recovery circuit for a wireless sensor node,” *MIT Sub-threshold Conference*, Lexington, October-2011.

## **TEACHING**

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@ Northeastern University, ECE Dept.:

- Spring 2018,2019,2020: **EECE-2150 Circuits and Signals.**
- Fall 2016, 2017, 2019: **EECE-7250 PMIC.**
- Summer 2017: **EECE-3140 Electronics-II.**

@ UVA, ECE Dept.:

- Fall 2013: **ECE-4332/6332 VLSI Design**

## **STUDENT SUPERVISION –Current**

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- Nikita Mirchandani, **Ph.D.** : Thesis Advisor
- Ziyue Xu, **Ph.D.** : Thesis Advisor
- Ankit Mittal, **Ph.D.** : Thesis Advisor
- Mostafa Abedi, **Ph.D.** : Thesis Advisor
- Mohsen Zaeimbashi, **Ph.D.** : Thesis Committee Member



- Chao Luo, **Ph.D.** : Thesis Committee Member
- Mahmoud Ibrahim, **Ph.D.** : Thesis Committee Member
- Shikhar Tewari, **M.S.** : Thesis Advisor
- Yuqing Zhang, **M.S.** : Thesis Advisor
- Tiancheng Yang, **M.S.** : Thesis Advisor

## **PROFESSIONAL ACTIVITIES**

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### **External Service**

- Associate Editor: IEEE Open Journal on Circuits and Systems (OJCAS) (2021-)
- Associate Editor: Journal of Low-Power Electronics and Application (JLPEA) (2020-)
- Member-Analog Signal Processing Technical Committee (ASPTC), IEEE-CAS (2020-)
- Panelist: NSF-Panels (2-panels 2018, 2-panels 2019)
- Technical Program Committees:
  - Design Automation Conference (DAC) (2020-)
  - International Conference on Computer Design (ICCD) (PC Member, 2019-)
  - International Symposium on Circuits and Systems (ISCAS) (PC Member, 2017-)
  - Midwest Symposium on Circuits and System (MWSCAS) (Organizing Committee Member-2017, Track-chair 2020, PC Member 2017-)
  - International Symposium on Low Power Electronics Design (ISLPED) (PC Member, 2017-)
  - International Conference on VLSI Design (VLSI-D) (PC Member, 2018-)
  - Great Lakes Symposium VLSI (GLS-VLSI) (PC Member, 2020-)
  - 6<sup>th</sup> International Conference on Wired/Wireless Internet Communications (WWIC)-2018 : Local arrangements Chair
- Guest Editor: Journal of Low-Power Electronics and Application (JLPEA) 2019.
- Editorial Review Board Member: IEEE Solid-State Circuits Letts (SSCL) (2017-)
- Reviewing and Refereeing
  - Book Reviewer: Springer
  - Journal Reviewer: JSSC,TCAS-I,TCAS-II, T-VLSI, ACCESS, JLPEA.

### **Internal Service**

- Hiring Committees
  - Faculty Hiring Committee-2020
  - Faculty Hiring Committee-2018

– Co-op faculty search committee-2017

- Strategic Planning Committee
- Member: Undergraduate Studies Committee 2017-18
- Member: CoE Awards Committee 2019-
- Member: ECE Awards Committee 2019-

### **Societies**

- Sr. Member-IEEE
- Member-IEEE Solid State Circuits Society (SSCS)
- Member-IEEE Circuits and Systems Society (CAS)

## **MEDIA COVERAGE**

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- “Joining an Adviser on Sabbatical,” School of Engineering and Applied Science, Unbound Magazine, Spring 2014.
- “U.Va. Spinoff PsiKick’s Batteryless Sensors Poised for Coming ‘Internet of Things’” UVA Today, April 16, 2014.
- IEEE SOLID-STATE CIRCUITS MAGAZINE, Spring 2013, discussed Dr. Shrivastava’s presentation at ISSCC 2013 on his graduate work on a single-inductor highly efficient energy harvesting and power management circuit.
- HIGHBEAMRESEARCH.COM (a premium information service for students, instructors, researchers, and professionals), published Wipo Publishes Patent of Benton H. Calhoun and Aatmesh Shrivastava for
- “Low Power Clock Source.” (WIPO, short for World Intellectual Property Organization, is the global forum for intellectual property services, policy, information and cooperation).
- MEDIA and ENTERTAINMENT TECHNOLOGIES (M and E Tech or Mandetech.com) (a digital publication), Ultra-low Power Bandgap Reference, discussed Dr. Shrivastava by name and described his work on bandgap reference.
- SEMICONDUCTOR MANUFACTURING AND DESIGN (SemiMD.com), a publication and portal covering semiconductor technologies, described Dr. Shrivastava’s presentation at ISSCC on Bandgap Reference.
- ELECTRONIC ENGINEERING TIMES (EETimes.com), covering the global electronics community, described discussions about Dr. Shrivastava’s presentation at ISSCC concerning his integrated IoT chips that aim to run from harvested ambient energy in the article 18 Views of ISSCC.
- HIGHBEAMBUSINESS (the business content provider from Cengage Learning, a leading producer of research solutions for the professional, library, and academic markets worldwide), in the article Bandgap Reference on the Agenda described Dr. Shrivastava’s bandgap reference invention as presented at ISSCC.

- UNIVERSITY OF VIRGINIA ENGINEERING UNBOUND MAGAZINE, Oct. 2014, described Dr. Shrivastava's circuit design research at MIT.
- HISPANICBUSINESS.COM, Patent Issued for Pulse Generation Circuits in Integrated Circuits, concerning patent filed by Dr. Shrivastava and a co-inventor.
- 4-TRADERS.COM (online media for investors specializing in stock exchange, financial and economic trends), Texas Instruments: Researchers Submit Patent Application, "Pulse Generation Circuits in Integrated Circuits", for Approval, concerning patent application by Dr. Shrivastava and a co-inventor

## **REFERENCES**

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- Available upon request.