

**Prof. Gabriel Alfonso Rincón-Mora, Ph.D.**

Motorola Solutions Foundation Professor, Georgia Institute of Technology

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**I. Degrees**

B.S. in Electrical Eng. (Magna Cum Laude), Florida Int. Univ., 1992.

M.S. in Electrical Eng. (Highest Honors), Georgia Inst. of Tech., 1994.

Ph.D. in Electrical Eng. (Outstanding Ph.D. Candidate), Georgia Inst. of Tech., 1996.

**II. Employment**

Electrical Engineer and Laboratory Syst. Specialist, Northern Telecom, 1993.

Analog IC Design Engineer, Texas Instruments, 1994–1996.

Senior Design Engineer and Design Team Leader, Texas Instruments, 1997–2001.

Member of Group Technical Staff, Texas Instruments, 1999–2003.

Adjunct Professor, Electrical and Computer Eng., Georgia Inst. of Tech., 1999–2001.

Senior Analog IC Des. Consultant, Texas Instruments, 2003–2004.

Assistant Professor, Electrical and Computer Eng., Georgia Inst. of Tech., 2001–2007.

Director, Georgia Tech Analog Consortium, Georgia Inst. of Tech., 2001–2004.

Director, TI Analog Fellowship Program, Georgia Inst. of Tech., 2001–2015.

Associate Professor with Tenure, Electrical and Computer Eng., Georgia Inst. of Tech., 2007–2012.

Visiting Professor, Electrical Eng., Nat. Cheng Kung Univ., Taiwan, 2011–2019.

Professor, Electrical and Computer Eng., Georgia Inst. of Tech., since 2012.

Motorola Solutions Foundation Professor, Georgia Inst. of Tech., since 2022.

**III. Research, Scholarship, and Creative Output****A. Books, Handbooks, and Book Chapters Published**

**Ph.D. Dissertation:** *Current Efficient, Low Voltage, Low Dropout Regulators*. Georgia Inst. of Tech., 1996.

**A1. Books** (sole author)

1. *Voltage References*. New Jersey: IEEE Press and John Wiley & Sons, Inc., 2001 [Translated into Chinese].

2. *Short Stories and Poems to Boot!* New York: Vantage Press, 2001.

3. *Triple Engagement*. New York: iUniverse, 2004.

4. *Power Management ICs*. Raleigh: Lulu, 2005.

5. *Analog IC Design with Low-Dropout Regulators*. New York: McGraw-Hill, Jan. 2009 [Translated into Chinese].

6. *Vanish*. Morrisville: Lulu, 2009.

7. *Analog IC Design with Low-Dropout Regulators, 2<sup>nd</sup> Edition*. New York: McGraw-Hill, 2014 [Translated into Chinese].

8. *Analog IC Design, 7<sup>th</sup> Edition*. New York: KDP, 2019.

9. *Power IC Design, 6<sup>th</sup> Edition*. Morrisville: Lulu, 2019.

10. *Analog Electronics*. New York: KDP, 2019.

11. *Switched Inductor Power IC Design*. New York: Springer Nature, 2022.

**A2. Handbooks** (sole author)

1. *Diodes & BJTs*. New York: KDP, 2019.

2. *MOSFETs*. New York: KDP, 2019.

3. *Switched-Inductor Power Supplies*. New York: KDP, 2019.

4. *Power Losses in Switched Inductors*. New York: KDP, 2020.

5. *Switched Inductor's Frequency Response*. New York: KDP, 2020.

6. *Switched Inductors: Feedback Controller*. New York: KDP, 2020.
7. *Switched Inductors: Control Loops*. New York: KDP, 2021.
8. *Switched Inductors: Building Blocks*. New York: KDP, 2021.

### A3. Invited Book Chapters (sole author)

1. "Harvesting Microelectronic Circuits," *Energy Harvesting Technologies*. Springer, Jan. 2009.
2. "Energizing and Powering Microsystems," *Integrated Microsystems*. CRC Press, Oct. 2011.
3. "Vibration-Based Energy-Harvesting Integrated Circuits," *Advances in Energy Harvesting Methods*. Springer, Feb. 2013.
4. "Energy-Harvesting Integrated Circuits," *Energy Harvesting with Functional Materials and Microsystems*. CRC Press, Nov. 2013.

### B. Patents Issued and Licensed (Prof. Rincón-Mora advised boldfaced inventors.)

1. G.A. Rincón *et al.*, "Amplifier circuit and method," U.S. 5,491,437, Feb. 13, 1996.
2. G.A. Rincón *et al.*, "Controlled current output stage amplifier circuit and method," U.S. 5,500,625, Mar. 19, 1996.
3. M. Corsi and G.A. Rincón, "Cross coupled quad comparator for current sensing...," U.S. 5,519,341, May 21, 1996.
4. G.A. Rincón *et al.*, "Output stage of amplifier circuit," EP 715405, Jun. 5, 1996.
5. G.A. Rincón *et al.*, "Controlled current output stage amplifier circuit and method," JP 8237046, Sept. 13, 1996.
6. M. Corsi and G.A. Rincón, "Current sensing circuit and method," U.S. 5,614,850, Mar. 25, 1997.
7. M. Corsi, G.A. Rincón *et al.*, "A voltage regulator," EP 851332, Jan. 7, 1998.
8. M. Corsi, G.A. Rincón *et al.*, "Drop-out voltage controller," JP 10187258, Jul. 14, 1998.
9. M. Corsi, G.A. Rincón *et al.*, "Low drop-out regulator with PMOS pass element," U.S. 5,867,015, Feb. 2, 1999.
10. G.A. Rincón-Mora, "DC-DC converter with voltage loss compensation," EP 928056, Jul. 7, 1999.
11. G.A. Rincón-Mora, "...piecewise-linear curvature corrected bandgap reference," U.S. 5,952,873, Sept. 14, 1999.
12. G.A. Rincón-Mora, "Optimized frequency shaping circuit topologies for LDOs," U.S. 5,982,226, Nov. 9, 1999.
13. G.A. Rincón-Mora and M. Corsi, "Low-drop-out voltage regulator...," EP 957421, Nov. 17, 1999.
14. G.A. Rincón-Mora *et al.*, "Low-dropout...regulator...transient...boost circuit," U.S. 6,046,577, Apr. 4, 2000.
15. G.A. Rincón-Mora, "Miller compensated amplifier for operation with capacitive loading," EP 1006648, Jun. 7, 2000.
16. G.A. Rincón-Mora, "Active compensating capacitive multiplier," U.S. 6,084,475, Jul. 4, 2000.
17. G.A. Rincón-Mora, "Bandgap circuits with curvature-correction," EP 1041480, Oct. 4, 2000.
18. G.A. Rincón-Mora, "Exact curvature-correcting method for bandgap circuits," U.S. 6,157,245, Dec. 5, 2000.
19. G.A. Rincón-Mora and M. Corsi, "Current-efficient low-drop-out voltage regulator...," U.S. 6,188,211, Feb. 13, 2001.
20. G.A. Rincón-Mora, "Accurate, fast, and user programmable hysteretic comparator," U.S. 6,229,350, May 8, 2001.
21. G.A. Rincón-Mora and M. Huggins, "High power supply...rejection...low drop-out...," U.S. 6,304,131, Oct. 16, 2001.
22. G.A. Rincón-Mora, "...low ripple, high frequency hysteretic...dc-dc converters," U.S. 6,369,555, Apr. 9, 2002.
23. G.A. Rincón-Mora and **B. Abesingha**, "Method of minimizing package-shift effects...," U.S. 6,432,753, Aug. 13, 2002.
24. G.A. Rincón-Mora, "Adjustable temperature-compensated threshold circuit...," EP 1265363, Dec. 11, 2002.
25. G.A. Rincón-Mora and **R. Stair**, "Buffer/driver for low dropout regulators," U.S. 6,501,305, Dec. 31, 2002.
26. G.A. Rincón-Mora, "...threshold circuit with trip-points exceeding the...supplies," U.S. 6,545,511, Apr. 8, 2003.
27. G.A. Rincón-Mora and **M. Pulkin**, "...low impedance driver for linear regulators," U.S. 6,573,694, Jun. 3, 2003.
28. G.A. Rincón-Mora, "Temperature-compensated threshold circuit," EP 1351063, Oct. 8, 2003.
29. G.A. Rincón-Mora and M. Corsi, "Current-efficient low-drop-out voltage regulator...," DE 69910888, Oct. 9, 2003.
30. G.A. Rincón-Mora, "Integrated low ripple, high frequency...hysteretic controller...," U.S. 6,628,109, Sept. 30, 2003.
31. G.A. Rincón *et al.*, "Output stage of amplifier circuit," DE 69532061, Dec. 11, 2003.
32. G.A. Rincón-Mora *et al.*, "...minimizes package-shift effects in integrated circuits...," U.S. 6,750,553, Jun. 15, 2004.
33. G.A. Rincón-Mora and **R. Stair**, "...threshold voltage extraction...capacitor multiplier," U.S. 6,806,762, Oct. 19, 2004.
34. M. Corsi, G.A. Rincón *et al.*, "A voltage regulator," DE 69727783, Dec. 30, 2004.
35. G.A. Rincón-Mora, **V. Gupta**, and P. Raha, "Low dropout...linear regulator...," U.S. 6,847,260, Jan. 25, 2005.
36. G.A. Rincón-Mora, "Active compensating capacitive multiplier," DE 69934566, Feb. 8, 2007.

37. G.A. Rincón-Mora and **M. Arnold**, "...buffer with rail-to-rail output for low dropout," U.S. 7,339,416, Mar. 4, 2008.
38. G.A. Rincón-Mora, "Temperature-compensated threshold circuit," DE 60225626, Apr. 30, 2008.
39. G.A. Rincón-Mora, "Exact curvature-correcting method for bandgap circuits," DE 60042142, June 18, 2009.
40. G.A. Rincón-Mora and **M. Arnold**, "Gate driver circuit for power transistor," U.S. 7,560,973, Jul. 14, 2009.
41. G.A. Rincón-Mora, "Increase in active compensation capacitive property," JP 4528394, Aug. 18, 2010.
42. **D. Kwon** and G.A. Rincón-Mora, "Rectifier-free piezoelectric energy harvester...", U.S. 8,368,290, Feb. 5, 2013.
43. **S. Yang** and G.A. Rincón-Mora, "Recycling piezoelectric energy-harvesting...charger," pending, Nov. 1, 2021.

### C. Articles Published

#### C1. Refereed Journal Articles (Prof. Rincón-Mora advised boldfaced authors.)

1. G.A. Rincón-Mora and P.E. Allen, "A low-voltage, low quiescent current, low drop-out regulator," *IEEE J. of Solid-State Circuits*, vol. 33, no. 1, pp. 36–44, Jan. 1998.
2. G.A. Rincón-Mora and P.E. Allen, "Optimized frequency-shaping circuit topologies for LDO's," *IEEE Trans. on Circuits and Syst. II*, vol. 45, no. 6, pp. 703–708, Jun. 1998.
3. B.J. Blalock, P.E. Allen, and G.A. Rincón-Mora, "Designing 1V op amps using standard digital CMOS technology," *IEEE Trans. on Circuits and Syst. II*, vol. 45, no. 7, pp. 769–780, Jul. 1998.
4. G.A. Rincón-Mora and P.E. Allen, "A 1.1 V current-mode and piecewise-linear curvature corrected bandgap reference," *IEEE J. of Solid-State Circuits*, vol. 33, no. 10, pp. 1551–1554, Oct. 1998.
5. G.A. Rincón-Mora, "Active capacitor multiplier in Miller-compensated circuits," *IEEE J. of Solid-State Circuits*, vol. 35, no. 1, pp. 26–32, Jan. 2000.
6. **R. Stair** and G.A. Rincón-Mora, "A low voltage, rail-to-rail, class AB CMOS amplifier with high drive and low output impedance characteristics," *IEEE Trans. on Circuits and Syst. II*, vol. 48, no. 8, pp. 753–761, Aug. 2001.
7. **B. Abesingha**, G.A. Rincón-Mora, and D. Briggs, "Voltage shift in plastic-packaged bandgap references," *IEEE Trans. on Circuits and Syst. II*, vol. 49, no. 10, pp. 681–685, Oct. 2002.
8. **R. Dokania** and G.A. Rincón-Mora, "Cancellation of load-regulation in low drop-out regulators," *IET Electronic Letters*, vol. 38, issue 22, pp. 1300–1302, Oct. 2002.
9. **B. Sahu** and G.A. Rincón-Mora, "A high-efficiency linear RF power amplifier with a power-tracking dynamically adaptive buck–boost Supply," *IEEE Trans. on Microwave Theory and Techniques*, vol. 52, no. 1, pp. 112–120, Jan. 2004.
10. **B. Sahu** and G.A. Rincón-Mora, "A low voltage, dynamic, non-inverting, synchronous buck–boost converter for portable applications," *IEEE Trans. on Power Electronics*, vol. 19, no. 2, pp. 443–452, Feb. 2004.
11. **S. Zhou** and G.A. Rincón-Mora, "A high efficiency, soft switching dc–dc converter with adaptive current-ripple control for portable applications," *IEEE Trans. on Circuits and Syst. II*, vol. 53, no. 4, pp. 294–298, Apr. 2006.
12. **M. Chen** and G.A. Rincón-Mora, "An accurate electrical battery model capable of predicting runtime and i–v performance," *IEEE Trans. on Energy Conversion*, vol. 21, no. 2, pp. 504–511, Jun. 2006.
13. **M. Chen** and G.A. Rincón-Mora, "Accurate, compact, and power efficient li-ion battery charger circuit," *IEEE Trans. on Circuits and Syst. II*, vol. 53, no. 11, pp. 1180–1184, Nov. 2006.
14. **H.P. Forghani-zadeh** and G.A. Rincón-Mora, "Low-power CMOS ramp generator circuit for dc–dc converters," *J. of Low Power Electronics*, vol. 2, no. 3, pp. 437–441, Dec. 2006.
15. **B. Sahu** and G. A. Rincón-Mora, "An accurate, low voltage, CMOS switching power supply with adaptive on-time pulse-frequency modulation," *IEEE Trans. on Circuits and Syst. I*, vol. 54, no. 2, pp. 312–321, Feb. 2007.
16. **B. Sahu** and G.A. Rincón-Mora, "A high efficiency WCDMA RF power amplifier (PA) with adaptive, dual-mode buck–boost supply and bias-current control," *IEEE Microwave and Wireless Components Letters*, vol. 17, no. 3, pp. 238–240, Mar. 2007.
17. **V. Gupta** and G.A. Rincón-Mora, "Achieving less than 2% 3- $\sigma$  mismatch with minimum channel-length CMOS devices," *IEEE Trans. on Circuits and Syst. II*, vol. 54, no. 3, pp. 232–236, Mar. 2007.
18. **H.P. Forghani-zadeh** and G.A. Rincón-Mora, "An accurate, continuous, and lossless self-learning CMOS current-sensing scheme for inductor-based dc–dc converters," *IEEE J. of Solid-State Circuits*, vol. 42, no. 3, pp. 665–679, Mar. 2007.
19. **H.P. Forghani-zadeh** and G.A. Rincón-Mora, "A fast and reliable top-level simulation strategy for mixed-signal ICs and its application to dc–dc converter circuits," *IET Circuits, Devices, and Syst.*, vol. 1, no. 2, pp. 143–150, Apr. 2007.
20. **H.P. Forghani-zadeh** and G.A. Rincón-Mora, "A programmable 210  $\mu$ V offset rail-to-rail  $G_M$ –C filter," *IEEE Trans. on Circuits and Syst. I*, vol. 54, no. 8, pp. 1636–1646, Aug. 2007.

21. **V. Gupta** and G.A. Rincón-Mora, "Low output impedance 0.6 $\mu$ m-CMOS sub-bandgap reference," *IET Electronic Letters*, vol. 43, pp. 1085–1087, Sept. 2007.
22. **N. Keskar** and G.A. Rincón-Mora, "A fast, sigma–delta boost dc–dc converter tolerant to wide LC filter variations," *IEEE Trans. on Circuits and Syst. II*, vol. 55, pp. 198–202, Feb. 2008.
23. **N. Keskar** and G.A. Rincón-Mora, "A compact 1–30 $\mu$ H, 1–350 $\mu$ F, 5–50m $\Omega$  ESR compliant, 1.5% accurate 0.6 $\mu$ m CMOS differential sigma–delta boost dc–dc converter," *Analog Integrated Circuits and Signal Processing J.*, vol. 54, no. 3, pp. 157–169, 2008.
24. **M. Chen** and G.A. Rincón-Mora, "A compact electrical model for microscale fuel cells capable of predicting runtime and i–v polarization performance," *IEEE Trans. on Energy Conversion*, vol. 23, no. 3, pp. 842–850, Sept. 2008.
25. **E.O. Torres** and G.A. Rincón-Mora, "Energy-harvesting system-in-package (SiP) microsystem," *ASCE J. of Energy Eng.*, Invited, vol. 134, no. 4, pp. 121–129, Dec. 2008.
26. **S. Kim** and G.A. Rincón-Mora, "Achieving high efficiency under micro-watt loads with switching buck dc–dc converters," *J. of Low Power Electronics*, vol. 5, no. 2, pp. 229–240, Aug. 2009.
27. **D. Kwon** and G.A. Rincón-Mora, "Single-inductor multiple-output (SIMO) switching dc–dc converters," *IEEE Trans. on Circuits and Syst. II*, Invited, vol. 56, no. 8, Aug. 2009.
28. **E.O. Torres** and G.A. Rincón-Mora, "Electrostatic energy-harvesting and battery-charging CMOS system prototype," *IEEE Trans. on Circuits and Syst. I*, vol. 56, no. 9, pp. 1938–1948, Sept. 2009.
29. **L.A. Milner** and G.A. Rincón-Mora, "Limits of predictive current-ripple suppression in switching power supply ICs," *IET Power Electronics*, vol. 3, no. 1, pp. 43–53, Jan. 2010.
30. **V. Gupta** and G.A. Rincón-Mora, "A low-impedance, sub-bandgap 0.6 $\mu$ m CMOS reference with 0.84% trimless 3-sigma accuracy and –30dB worst-case PSRR up to 50MHz," *Analog Integrated Circuits and Signal Processing J.*, vol. 62, no. 3, p. 345, 2010.
31. **E.O. Torres** and G.A. Rincón-Mora, "A 0.7  $\mu$ m BiCMOS electrostatic energy-harvesting system IC," *IEEE J. of Solid-State Circuits*, vol. 45, no. 2, pp. 483–496, Feb. 2010.
32. **N. Keskar** and G.A. Rincón-Mora, "One clock-cycle response 0.5 $\mu$ m CMOS dual-mode sigma–delta dc–dc bypass boost converter stable over wide  $R_{ESR}LC$  variations," *Advances in Power Electronics*, vol. 2010, no. 253508, p. 9, 2010.
33. **L.A. Milner** and G.A. Rincón-Mora, "A feed-forward 10 $\times$  CMOS current-ripple suppressor for switching power supplies," *IEEE Trans. on Circuits and Syst. II*, vol. 57, no. 5, pp. 354–378, May 2010.
34. **E.O. Torres** and G.A. Rincón-Mora, "Self-tuning electrostatic energy-harvester IC," *IEEE Trans. on Circuits and Syst. II*, vol. 57, no. 10, pp. 808–812, Oct. 2010.
35. **A. Patel** and G.A. Rincón-Mora, "High power-supply-rejection (PSR) current-mode low-dropout (LDO) regulator," *IEEE Trans. on Circuits and Syst. II*, vol. 57, no. 11, pp. 868–873, Nov. 2010.
36. **D. Kwon** and G.A. Rincón-Mora, "A 2- $\mu$ m BiCMOS rectifier-free ac–dc piezoelectric energy harvester–charger IC," *IEEE Trans. on Biomedical Circuits and Syst.*, Invited, vol. 4, no. 6, pp. 400–409, Dec. 2010.
37. **D. Kwon**, G.A. Rincón-Mora, and **E.O. Torres**, "Harvesting ambient kinetic energy with switched-inductor converters," *IEEE Trans. on Circuits and Syst. I*, Invited, vol. 58, no. 7, pp. 1551–1560, July 2011.
38. **R.D. Prabha**, **D. Kwon**, **O. Lazaro**, **K.D. Peterson**, and G.A. Rincón-Mora, "Increasing electrical damping in energy-harnessing transducers," *IEEE Trans. on Circuits and Syst. II*, Invited, vol. 58, no. 12, pp. 787–791, Dec. 2011.
39. **L.A. Milner** and G.A. Rincón-Mora, "Small saturating inductors for more compact switching power supplies," *IEEE Trans. on Electrical and Electronic Eng.*, vol. 7, no. 1, pp. 69–73, Jan. 2012.
40. **S. Kim** and G.A. Rincón-Mora, "Single-inductor fuel cell–li ion charger–supply IC with nested hysteretic control," *Analog Integrated Circuits and Signal Processing J.*, vol. 70, no. 1, Page 33–45, Jan. 2012.
41. G.A. Rincón-Mora, **A.A. Blanco**, and **J.P. Vogt**, "A 1.3- $\mu$ W, 0.6-m CMOS current–frequency analog–digital converter for implantable blood-glucose monitors," *J. of Low Power Electronics*, vol. 8, pp. 47–57, Feb. 2012.
42. **O. Lazaro**, G.A. Rincón-Mora, and **J.P. Vogt**, "1–50-MHz VHF electromagnetic sensor-interface power-attenuation detector circuit," *Int. J. of Electronics and Communications*, vol. 66, no. 6, pp. 502–508, Jun. 2012.
43. **O. Lazaro** and G.A. Rincón-Mora, "Inductively coupled 180-nm CMOS charger with adjustable energy-investment capability," *IEEE Trans. on Circuits and Syst. II*, vol. 60, no. 8, pp. 482–486, Aug. 2013.
44. **O. Lazaro** and G.A. Rincón-Mora, "180-nm CMOS wideband capacitor-free inductively coupled power receiver and charger," *IEEE J. of Solid-State Circuits*, vol. 48, no. 11, pp. 2839–2849, Nov. 2013.

45. **D. Kwon** and G.A. Rincón-Mora, "A single-inductor 0.35- $\mu\text{m}$  CMOS energy-investing piezoelectric harvester," *IEEE J. of Solid-State Circuits*, vol. 49, no. 10, pp. 2277–2291, Oct. 2014.
46. **A. Blanco** and G.A. Rincón-Mora, "A 44–93- $\mu\text{s}$  250–400-mV 0.18- $\mu\text{m}$  CMOS starter for dc-sourced switched-inductor energy harvesters," *IEEE Trans. on Circuits and Syst. II*, vol. 61, no. 12, pp. 1002–1006, Dec. 2014.
47. **O. Lazaro** and G.A. Rincón-Mora, "A non-resonant self-synchronizing inductively coupled 0.18- $\mu\text{m}$  CMOS power receiver and charger," *IEEE J. of Emerging and Selected Topics in Power Electronics*, vol. 3, no. 1, pp. 261–271, Mar. 2015.
48. **S. Kim** and G.A. Rincón-Mora, "Dual-source hysteretic switched-inductor 0.18- $\mu\text{m}$  complementary metal–oxide–semiconductor charger–supply system," *IET Circuits, Devices, and Syst.*, vol. 9, no. 4, pp. 275–282, 2015.
49. **R.D. Prabha** and G.A. Rincón-Mora, "Maximizing power-transfer efficiency in low-power DC–DC converters," *IET Electronic Letters*, vol. 51, no. 23, pp. 1918–1920, Nov. 2015.
50. **R.D. Prabha** and G.A. Rincón-Mora, "0.18- $\mu\text{m}$  light-harvesting battery-assisted charger–supply CMOS system," *IEEE Trans. on Power Electronics*, vol. 31, no. 4, pp. 2950–2958, Apr. 2016.
51. G.A. Rincón-Mora and **S. Yang**, "Tiny piezoelectric harvesters: Principles, constraints, and power conversion," *IEEE Trans. on Circuits and Syst. I*, Invited, vol. 63, no. 5, pp. 639–649, May 2016.
52. **R.D. Prabha** and G.A. Rincón-Mora, "Drawing the most power from low-cost single-well 1- $\text{mm}^2$  CMOS photovoltaic cells," *IEEE Trans. on Circuits and Syst. II*, vol. 64, no. 1, pp. 46–50, Jan. 2017.
53. **C. Solís** and G.A. Rincón-Mora, "0.6- $\mu\text{m}$  CMOS switched-inductor dual-supply hysteretic current-mode buck converter," *IEEE Trans. on Power Electronics*, vol. 32, no. 3, pp. 2387–2394, Mar. 2017.
54. **A. Blanco** and G.A. Rincón-Mora, "Bootstrapping and resetting CMOS starter for thermoelectric and photovoltaic chargers," *IEEE Trans. on Circuits and Syst. II*, vol. 65, no. 2, pp. 156–160, Feb. 2018.
55. **A. Blanco** and G.A. Rincón-Mora, "Compact fast-waking light/heat-harvesting 0.18- $\mu\text{m}$  CMOS switched-inductor charger," *IEEE Trans. on Circuits and Syst. I*, vol. 65, no. 6, pp. 2024–2034, June 2018.
56. **C. Solís** and G.A. Rincón-Mora, "87%-efficient 330-mW 0.6- $\mu\text{m}$  single-inductor triple-output buck–boost power supply," *IEEE Trans. on Power Electronics*, vol. 33, no. 8, pp. 6837–6844, Aug. 2018.
57. **R.D. Prabha** and G.A. Rincón-Mora, "Light-harvesting CMOS power-supply system for 0–10-mW wireless microsensors," *IEEE Sensors J.*, vol. 19, no. 2, pp. 726–734, Jan. 2019.
58. **S. Yang** and G.A. Rincón-Mora, "Energy-harvesting piezoelectric-powered CMOS series switched-inductor bridge," *IEEE Trans. on Power Electronics*, vol. 34, no. 7, pp. 6489–6497, Jul. 2019.
59. **N. Xing** and G.A. Rincón-Mora, "180-nm 85%-efficient inductively coupled switched resonant half-bridge power receiver," *IEEE Trans. on Circuits and Syst. II*, vol. 66, no. 6, pp. 983–987, Jun. 2019.
60. **C. Solís** and G.A. Rincón-Mora, "Stability and design limits of hysteretic current-mode switched-inductor converters," *IEEE J. of Semiconductor Tech. and Science*, vol. 19, no. 4, pp. 321–326, Jun. 2019.
61. **N. Xing** and G.A. Rincón-Mora, "Highest maximum power point of radially distant inductively coupled power receivers with deep submicron CMOS," *IEEE Trans. on Industrial Informatics*, vol. 16, no. 2, pp. 1086–1093, Feb. 2020.
62. **S. Yang** and G.A. Rincón-Mora, "Efficient power transfers in piezoelectric energy-harvesting switched-inductor chargers," *IEEE Trans. on Circuits and Syst. II*, vol. 68, no. 4, pp. 1248–1252, Apr. 2021.
63. **N. Xing** and G.A. Rincón-Mora, "A self-synchronized maximum-power-point inductively coupled wireless battery charger for embedded microsensors," *IEEE J. of Emerging and Selected Topics in Industrial Electronics*, vol. 2, no. 3, pp. 297–304, July 2021.
64. **A. Dinesh** and G.A. Rincón-Mora, "High-PSR LDOs: Variations, improvements, and best compromise," *IEEE Trans. on Circuits and Syst. II*, vol. 69, no. 3, pp. 924–928, Mar. 2022.
65. **Q. Zhi**, G.A. Rincón-Mora, and **P. Gu**, "Autonomous and Programmable 12-W 10-kHz Single-Cell Li-Ion Battery Tester," *IEEE Trans. on Instrumentation & Measurement*, vol. 71, Apr. 2022.
66. **T. Chang** and G.A. Rincón-Mora, "Design of switched-inductor charging regulator for resistive on-chip thermoelectric generators," *IEEE Trans. on Circuits and Syst. II*, vol. 69, no. 6, pp. 2872–2876, Jun. 2022.
67. **T. Chang** and G.A. Rincón-Mora, "Lowest- $v_{\text{IN}}$  CMOS Single-Inductor Boost Charger: Design, Limits, and Validation," *IEEE Trans. on Power Electronics*, vol. 37, no. 9, pp. 10808–10820, Sep. 2022.
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**C2. Invited Journal Articles** (Prof. Rincón-Mora advised boldfaced authors.)

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18. "BJT: Activation," *YouTube*, 17 min. 54 sec., Sep. 2020.
19. "BJT: Modes," *YouTube*, 17 min. 53 sec., Oct. 2020.
20. "N-channel JFET," *YouTube*, 19 min. 55 sec., Oct. 2020.
21. "P-channel JFET," *YouTube*, 22 min. 46 sec., Nov. 2020.
22. "NMOS: Sub-Threshold," *YouTube*, 17 min. 20 sec., Nov. 2020.
23. "NMOS: Inversion," *YouTube*, 20 min. 10 sec., Dec. 2020.
24. "PMOS: Sub-Threshold," *YouTube*, 15 min. 33 sec., Dec. 2020.
25. "PMOS: Inversion," *YouTube*, 20 min. 38 sec., Jan. 2021.

#### E. Commercial Designs/Products Released to Production (RTP)

1. G.A. Rincón-Mora (Project Leader), TPS2810 - CMOS driver, RTP 1995.
2. G.A. Rincón-Mora (Project Leader), TPS2811 - CMOS driver, RTP 1995.
3. G.A. Rincón-Mora (Project Leader), TPS2816 - CMOS driver, RTP 1995.
4. G.A. Rincón-Mora (Project Leader), TPS2817 - CMOS driver, RTP 1995.
5. G.A. Rincón-Mora (Project Leader), TPS2818 - CMOS driver, RTP 1995.
6. G.A. Rincón-Mora (Project Leader), TPS2819 - CMOS driver, RTP 1995.
7. G.A. Rincón-Mora (Circuit Designer), Viper - BiCMOS Wireless Power Manag. IC, RTP 1995.
8. G.A. Rincón-Mora (Circuit Designer), Viper Lite - BiCMOS Low Dropout Regulator, RTP 1996.
9. G.A. Rincón-Mora (Circuit Designer), Maverick - BiCMOS Wireless Power Manag., RTP 1997.
10. G.A. Rincón-Mora (Circuit Designer), TPS912x - BiCMOS Wireless Power Manag., RTP 1998.
11. G.A. Rincón-Mora (Des. Team Leader), TPS5210 - BiCMOS PWM Controller, RTP 1998 - featured on *EDN's Top 100 Products* and on the cover of *Electronic Des.*
12. G.A. Rincón-Mora (Des. Team Leader), TPS5615 - BiCMOS PWM Controller, RTP 1998.
13. G.A. Rincón-Mora (Des. Team Leader), TPS5618 - BiCMOS PWM Controller, RTP 1998.
14. G.A. Rincón-Mora (Des. Team Leader), TPS5625 - BiCMOS PWM Controller, RTP 1998.
15. G.A. Rincón-Mora (Des. Team Leader), TPS5633 - BiCMOS PWM Controller, RTP 1998.
16. G.A. Rincón-Mora (Des. Team Leader), SN104685DW - BiCMOS PWM Controller, RTP 1998.

17. G.A. Rincón-Mora (Des. Team Leader), TPS7415D - CMOS Liner Reg., RTP 1999.
18. G.A. Rincón-Mora (Des. Team Leader), TPS7418D - CMOS Liner Reg., RTP 1999.
19. G.A. Rincón-Mora (Des. Team Leader), TPS7425D - CMOS Liner Reg., RTP 1999.
20. G.A. Rincón-Mora (Des. Team Leader), TPS7430D - CMOS Liner Reg., RTP 1999.
21. G.A. Rincón-Mora (Des. Team Leader), TPS7433D - CMOS Liner Reg., RTP 1999.
22. G.A. Rincón-Mora (Des. Team Leader), TPS56100 - 5V BiCMOS PWM Controller, RTP 1999.
23. G.A. Rincón-Mora (Tech. Advisor/Circuit Designer), TPS56300 - BiCMOS Chrg Pump, RTP 1999.
24. G.A. Rincón-Mora (Des. Team Leader), TPS5211 - BiCMOS 1MHz Hyst. Controller, RTP 1999.
25. G.A. Rincón-Mora (Des. Team Leader), TPS5300 - BiCMOS Laptop PWM Controller, RTP 2001.
26. G.A. Rincón-Mora (Circuit Designer), MSP430's LDO - BiCMOS Low Dropout Regulator, RTP 2004.

## F. Speeches and Presentations

### F1. Keynotes Addresses and Plenary Speeches

1. "Orgullo Hispano," Robins Air Force Base, Sept. 23, 2003.
2. "Robins AFB Hispanic Heritage Luncheon," Robins Air Force Base, Oct. 3, 2005.
3. "Energy & Power Management Trends," Analog Leaders Forum, Seoul, Korea, Oct. 16, 2009.
4. "Energizing & Powering Microsystems," IEEE Int. Syst.-on-Chip Des. Conf., Busan, Korea, Nov. 23, 2009.
5. "Energy-Harvesting ICs," IEEE Circuits & Syst. for Medical & Environmental Appl., Mérida, Mexico, Dec. 13–15, 2010.
6. "Powering Wireless Microsensors," Semiconductor Equipment & Material Int. Conf., Seoul, Korea, Feb. 12–14, 2013.
7. "Non-academic Routes Beyond the Eng. Ph.D.," Sloan Foundation, Atlanta, GA, Apr. 14, 2014.
8. "Powering Microsystems," IEEE Int. Conf. on Microelectronics, Doha, Qatar, Dec. 14–17, 2014.
9. "Microwatt CMOS Harvesters," Infrared Radiation, Thermoelectricity and Chaos Workshop, U.S. Office of Naval Res., James Madison Univ., Harrisonburg, VA, Jun. 17, 2015.
10. "Higher Education, Success, and Life in Electrical Eng.," IEEE Solid-State Circuits & Circuits and Syst. Soc., Tainan, Taiwan, Nov. 19, 2015.
11. "Powering Intelligent IoT Microsensors," IEEE Int. Syst.-on-Chip Des. Conf., Jeju, Korea, Oct. 25, 2016.
12. "Life, Happiness, Success, and Higher Education in Electrical Eng.," IEEE Solid-State Circuits & Circuits and Syst. Soc., Tainan, Taiwan, Nov. 21, 2016.
13. "Energy-Harvesting IoT Microsensors," CMOS Emerging Technologies, Warsaw, Poland, Mar. 28–30, 2017.
14. "On The Elusive Art of Managing Time & Res. Projects," IEEE Solid-State Circuits & Circuits and Syst. Soc., Tainan, Taiwan, Nov. 15, 2017.
15. "Energizing Miniaturized IoT Sensors," IEEE Int. Conf. on Des. & Test of Integrated Micro & Nano-Syst., Gammarth, Tunisia, Apr. 29, 2019.

### F2. Distinguished Lectures (plenary)

16. *Linear Regulators* (1 day). IEEE SSCS Distinguished Lecture in Hsinchu, Taiwan, Jun. 8, 2006.
17. *Linear Regulators* (1 day). IEEE SSCS Distinguished Lecture in Taipei, Taiwan, Jun. 9, 2006.
18. "Powering Micro-Syst.," IEEE Circuits and Syst. Soc., Montreal, Canada, Jul. 17, 2009.
19. "Harvesting Kinetic Energy in Miniaturized Syst.," IEEE Circuits and Syst. Soc., Montreal, Canada, Sept. 17, 2010.
20. "AC Des. & Performance of Low-Dropout Regulators," IEEE Circuits and Syst. Soc., Univ. of Puerto Rico at Mayagüez, Nov. 12, 2010.
21. "AC Des. & Performance of Low Dropout Regulators," IEEE Circuits and Syst. Soc., Tainan, Taiwan, Nov. 26, 2010.
22. "Energizing & Powering Microsystems," MediaTek-NTU Distinguished Professor Talk, Nanyang Technological Univ., Singapore, Feb. 29, 2016.
23. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Univ. of Puerto Rico at Mayagüez, Mar. 22, 2018.
24. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Montevideo, Uruguay, Apr. 30, 2018.
25. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Curitiba, Brazil, May 2, 2018.
26. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Santiago, Chile, May 10, 2018.
27. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Valparaíso, Chile, May 11, 2018.

28. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Thessaloniki, Greece, Dec. 7, 2018.
29. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Santa Clara, California, Feb. 28, 2019.
30. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Lima, Peru, Mar. 21, 2019.
31. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Ajou Univ., Seoul, Korea, May 9, 2019.
32. "Energizing & Powering Microsystems," IEEE Circuits and Syst. Soc., Sogang Univ., Seoul, Korea, May 10, 2019.
33. "Unraveling Feedback Translations," IEEE Circuits and Syst. Soc., Philadelphia, Pennsylvania, June 9, 2022.
34. "Switched-Inductor Power Supplies: Compact Control Loops," IEEE Circuits and Syst. Soc., Hsinchu, Taiwan, Dec. 16, 2022.
35. "Energizing & Powering Wireless Microsystems," SIST Distinguished Lecture, Shanghai, China, Jan. 6, 2023.

**F3. Invited Professional Courses** (sole instructor)

36. *Integrated DC–DC Converters* (1 day). RF Micro-Devices in Greensboro, NC, Apr. 2002.
37. *Power Management ICs* (3 days). Hong Kong Science & Tech. Park, Hong Kong, China, Aug. 2003.
38. *CMOS Analog Integrated Circuits* (5 days). Global Learning & Conf. Center, Atlanta, GA, Sept. 26–30, 2005.
39. *Power Supply ICs for RF PAs* (1 hour). Invited IEEE Expert Now Module, Fall 2005.
40. *Power Management ICs* (4 days). ON Semiconductor in Bratislava, Slovakia, Dec. 12–15, 2005.
41. *Power Management ICs* (4 days). ON Semiconductor in Toulouse, France, Dec. 19–22, 2005.
42. *Power Management ICs* (4 days). Space & Naval Warfare Syst. Command, San Diego, CA, Apr. 10–13, 2006.
43. *Power Management ICs* (4 days). Cypress Semiconductor in Colorado Springs, CO, Apr. 17–20, 2006.
44. *Power Management ICs* (4 days). Toko Inc. in Saitama, Japan, Dec. 11–14, 2006.
45. *Power Management ICs* (3 days). Intel Corp. in Hillsboro, OR, May 9–11, 2007.
46. *Power Management ICs* (4 days). Spyro Tech. in Singapore, May 21–24, 2007.
47. *Analog IC Des.* (4 days). Integrated Device Tech. in Duluth, GA, Jan. 26, Feb. 23, and Mar. 9 and 23, 2009.
48. *Designing Bandgap Voltage References* (2 days). Nat. Cheng-Kung Univ. in Tainan, Taiwan, Dec. 5–6, 2012.
49. *Stabilizing Complex Single-Inductor DC–DC Power Supplies* (2 days), Nat. Cheng-Kung Univ., Tainan IEEE Solid-State Circuits and Circuits and Syst. Soc. Chapters in Tainan, Taiwan, Nov. 17 and 20, 2015.
50. *Linear Regulators* (3 days). Dialog Semiconductor in Swindon, United Kingdom, Dec. 1–3, 2015.
51. *Designing Photovoltaic-Sourced Charger-Supply Microsystems* (2 days). Nat. Cheng-Kung Univ., Tainan IEEE Solid-State Circuits and Circuits and Syst. Soc. Chapters in Tainan, Taiwan, Nov. 17–18, 2016.
52. *Des. Insight and Intuition of Negative Feedback at the Transistor Level* (2 days). Nat. Cheng-Kung Univ., Tainan IEEE Solid-State Circuits and Circuits and Syst. Soc. Chapters in Tainan, Taiwan, Nov. 18 and 21, 2016.
53. *Switched Power Supplies & Energy Harvesters* (4 days). Dialog Semiconductor in Santa Clara, CA, Mar. 20–23, 2017.

**F4. Conference Seminars and Tutorials** (sole presenter)

54. "Self-Oscillating Hysteretic DC–DC Controllers," IEEE Power Electronics Specialists Conf., Vancouver, Canada, 2001.
55. "Integrated LDOs: From the Ground Up!" IEEE Int. Symp. on Circuits and Syst., Scottsdale, AZ, 2002.
56. "Integrated DC–DC Converters: A Topological Journey!" IEEE Midwest Symp. on Circuits and Syst., Tulsa, OK, 2002.
57. "Dynamically Adaptive Power Supply Circuits for PA Wireless Appl.," IEEE Int. Microwave Symp., Long Beach, CA 2005.
58. "Hybrid Fuel Cell/Lithium-Ion Powered, Power Conscious SiP ICs," 1<sup>st</sup> Int. Workshop on 3S - SOP, SIP, SOC Electronic Technologies, Atlanta, GA, 2005.
59. "AC Des. and Performance of Low-Dropout Regulators (LDOs)," IEEE European Conf. on Circuit Theory and Des., Seville, Spain, 2007.
60. "Powering Micro-Syst. with Fuel-Cell Hybrids," 10th Annual Int. Conf. on Small Fuel Cells, Atlanta, GA 2008.
61. "Low-Dropout Regulator (LDO) ICs," IEEE Int. NEWCAS–TAISA Conf., Montreal, Canada, 2008.
62. "Powering Microsystems," CMOS Emerging Technologies Workshop, Vancouver, Canada, 2009.
63. "Switching DC-DC Supplies and their Single-Inductor, Multiple-Output (SIMO) Derivatives," IEEE Int. Symp. on Circuits and Syst., Paris, France, 2010.
64. "Energy-Harvesting Switching Converter ICs," Int. Workshop on Power Supply On Chip, Cork, Ireland, 2010.

65. "Energizing and Powering Microsystems," The Materials Res. Soc. Fall Meeting, Boston, MA, 2010.
66. "Power-Management Syst. on Chip for Mobile Appl.," IEEE Int. Conf. on Microelectronics, Cairo, Egypt, 2010.
67. "Power-Supply Circuits and Syst. for Battery-Powered Devices," IEEE Very Large-Scale Integration Des., Automation and Test, Hsinchu, Taiwan, 2011.
68. "Energy-Harvesting ICs," IEEE European Solid-State Circuits Conf., Helsinki, Finland, 2011.
69. "Energizing and Powering Microsystems," IEEE Faible Tension Faible Consommation, Paris, France, 2012.
70. "Energy-Harvesting Integrated Circuits," IEEE Int. NEWCAS Conf., Montreal, Canada, 2012.
71. "Harvesting ICs," CMOS Emerging Technologies Workshop, Vancouver, Canada, 2012.
72. "Energy-Harnessing Integrated Circuits," Seminario de Nanoelectrónica y Diseño Avanzado, Departamento de Electrónica del Instituto Nacional de Astrofísica, Óptica y Electrónica, Puebla, México, 2012.
73. "Energizing and Powering Microsystems," SHPE Nat. Conf., Ft. Worth, Texas, 2012.
74. "Feedback Control of Switched-Inductor Supplies," IEEE Asia Pacific Conf. on Circuits and Syst., Kaohsiung, Taiwan, 2012.
75. "Designing Bandgap-Voltage References," IEEE Int. Symp. on Circuits and Syst., Beijing, China, 2013.
76. "Energy-Harvesting Integrated Circuits," IEEE Int. Symp. on Ind. Electronics, Taipei, Taiwan, 2013.
77. "Single-Inductor Multiple-Output Power-Supply ICs," IEEE Int. NEWCAS Conf., Paris, France, 2013.
78. "Designing Bandgap-Voltage References," IEEE Faible Tension Faible Consommation, Paris, France, 2013.
79. "Power Electronic Interfaces for Energy Harvesters," PowerMEMS 2013, London, England, 2013.
80. "Energizing Wireless Microsensors," Int. Forum on Green Energy Electronics, Nat. Taiwan Univ. of Science and Tech., Taipei, Taiwan, July 28, 2014.
81. "Energizing Wireless Microsensors," Int. Forum on Green Energy Electronics, Nat. Cheng Kung Univ., Tainan, Taiwan, July 29, 2014.
82. "Tiny DC-Sourced Single-Inductor Charger-Supply ICs," IEEE Midwest Symp. on Circuits and Syst., College Station, TX, 2014.
83. "Miniaturized Energy-Harvesting Piezoelectric Chargers," IEEE Custom Integrated Circuits Conf., San Jose, CA, 2014.
84. "Miniaturized Energy-Harvesting Piezoelectric Chargers," IEEE Int. Symp. on Integrated Circuits, Singapore, 2014.
85. "Powering Microsystems," IEEE Int. Symp. on Quality Electronic Des., Santa Clara, CA, 2015.
86. "Energy-Harvesting Microsystems," IEEE Very Large-Scale Integration Des., Automation and Test, Hsinchu, Taiwan, 2015.
87. "Miniaturized Energy-Harvesting Piezoelectric Chargers," IEEE Int. Symp. on Circuits and Syst., Lisbon, Portugal, 2015.
88. "Miniaturized Energy-Harvesting Piezoelectric Chargers," IEEE Int. Symp. on Ind. Electronics, Rio de Janeiro, Brazil, 2015.
89. "Tiny DC-Sourced Single-Inductor Charger-Supply ICs," IEEE Int. Syst.-on-Chip Conf., Beijing, China, 2015.
90. "Tiny Inductively Powered Battery Chargers," IEEE Int. NEWCAS Conf., Vancouver, Canada, 2016.
91. "Tiny Inductively Powered Battery Chargers," IEEE Asia Pacific Conf. on Circuits and Syst., Jeju, South Korea, 2016.
92. "Low-Dropout Regulator ICs," IEEE Int. Conf. on Electronics Circuits and Syst., Monte Carlo, Monaco, 2016.
93. "Tiny Energy-Harvesting Piezoelectric Chargers," IEEE Int. Conf. on Ind. Tech., Toronto, Canada, 2017.
94. "Light-Harvesting Photovoltaic Charger-Supplies," IEEE Canadian Conf. on Electrical and Computer Eng., Windsor, Canada, 2017.
95. "Tiny Inductively Powered Battery Chargers," IEEE Int. Symp. on Ind. Electronics, Edinburgh, Scotland, 2017.
96. "Tiny Light-Harvesting Photovoltaic Charger-Supplies," IEEE/ACM Int. Symp. on Low Power Electronics and Des., Taipei, Taiwan, 2017.
97. "Energizing and Powering Intelligent Microsensors," IEEE/IEIE Int. Conf. On Consumer Electronics, Jeju, Korea, 2018.
98. "Tiny Inductively Powered Battery Chargers," IEEE Midwest Symp. on Circuits and Syst., Windsor, Canada, 2018.
99. "Energizing & Powering Wireless Biomedical Microsystems," Energy and Public Health Workshop, Atlanta, 2021.
100. "How to Stabilize and Control DC-DC Switched-Inductor Power Supplies," IEEE Int. Symp. on Circuits and Syst., Austin, Texas, 2022.

101. "Tiny Energy-Harvesting Piezoelectric Chargers," IEEE Int. Conf. on Electronic Circuits and Syst., Glasgow, United Kingdom, 2022.

**F5. Invited Research Seminars** (sole presenter)

102. "Integrated Power Management Circuits." Nat. Semiconductor Corp., Santa Clara, CA, Dec. 2002.
103. "Power Conscious ICs." Texas A&M Univ., College Station, TX, Jun. 21, 2004.
104. "El Mundo es Análogo, y las Oportunidades son Muchas." Univ. of Puerto Rico at Mayagüez, Oct. 18, 2004.
105. "Hybrid Fuel Cell/Lithium-Ion Powered, Power Conscious ICs." Nat. Semiconductor Corp., Santa Clara, CA, Jun. 2005.
106. "Microsystems: Power and Energy." Army Res. Lab Advanced Microsystems Workshop, Langley, VA, Jan. 30, 2006.
107. "Self-Sustaining, Self-Powered, Energy and Power Conscious ICs for Micro-Scale Devices," Universitat Politècnica de Catalunya, Barcelona, Spain, Jul. 10, 2006.
108. "Self-Powered, Self-Sustaining Syst.-on-Chip and Syst.-in-Package Power Solutions," Nat. Science Foundation and Intelligence Community Workshop on Micro-Scale Power Sources, Langley, VA, Apr. 24-25, 2007.
109. "Powering Micro-Syst.," Nat. Semiconductor Corp., Santa Clara, CA, Nov. 30, 2007.
110. "AC Des. and Performance of Low-Dropout Regulators," Texas A&M Univ. at College Station, TX, Jun. 9, 2008.
111. "Power Losses in Switching DC-DC Converter ICs," Texas A&M Univ. at College Station, TX, Jun. 9, 2008.
112. "Powering Micro-Syst.," Shanghai Jiao Tong Univ., Shanghai, China, Oct. 8, 2008.
113. "Powering Micro-Syst.," Linear Tech. Corp., San Jose, CA, Feb. 13, 2009.
114. "Energizing and Powering Microsystems," *IEEE Electron Device Soc. Chapter*, Vancouver, Canada, Sept. 24, 2009.
115. "Harvesting Ambient Energy in Miniaturized Syst.," *Energy and Power Analog Circuit Challenges Workshop*, Semiconductor Res. Corp. Texas Analog Center of Excellence, Dallas, TX, Sept. 28, 2009.
116. "Single-Inductor Multiple-Output Switching DC-DC Converters," Inha Univ., Incheon, Korea, Nov. 19, 2009.
117. "Single-Inductor Multiple-Output Switching DC-DC Converters," Samsung, Seoul, Korea, Nov. 20, 2009.
118. "Power Management ICs for Portable Devices," Univ. of Seoul, Korea, Feb. 17, 2010.
119. "Energizing & Powering Microsystems," Electronics & Telecommunications Res. Inst., Daejeon, Korea, Feb. 18, 2010.
120. "Power Management ICs for Portable Devices," Silicon Works Co., Daejeon, Korea, Feb. 18, 2010.
121. "Energizing & Powering Microsystems," Korea Advanced Inst. of Science and Tech., Feb. 19, 2010.
122. "Harvesting Energy in Miniaturized Syst.," *IT Convergence Res. Project Workshop*, KAIST, Korea, Feb. 19, 2010.
123. "Energizing & Powering Microsystems," Texas Instruments, Dallas, TX, Oct. 25, 2010.
124. "Harvesting Kinetic Energy in Miniaturized Syst.," Nat. Taiwan Univ., Taipei, Taiwan, Nov. 23, 2010.
125. "Energizing & Powering Microsystems," IEEE SSCS Hsinchu Chapter, Taiwan, Nov. 24, 2010.
126. "Power Losses in Switching DC-DC Converter ICs," Nat. Cheng Kung Univ., Tainan, Taiwan, Nov. 26, 2010.
127. "Energy-Harnessing ICs," Nat. Semiconductor Corp., Santa Clara, CA, July 15, 2011.
128. "AC Des. & Performance of LDOs," IEEE CASS Taipei Chapter, Hsinchu, Taiwan, Sept. 5, 2011.
129. "Energy-Harnessing ICs," ON Semiconductor, Phoenix, AZ, Oct. 4, 2011.
130. "Energy-Harnessing ICs," Texas Instruments, Dallas, TX, Oct. 5, 2011.
131. "Energy-Harnessing ICs," IEEE Ind. Electronics, Power Electronics, & Industry Appl. Soc., Nat. Tsing Hua Univ., Hsinchu, Taiwan, Dec. 9, 2011.
132. "Frequency Response of Switching DC-DC Converters," Nat. Cheng Kung Univ., Tainan, Taiwan, Dec. 14, 2011.
133. "Feedback Control of Switching DC-DC Converters," Nat. Cheng Kung Univ., Tainan, Taiwan, Dec. 14, 2011.
134. "Harvesting Kinetic Energy in Miniaturized Syst.," Space and Naval Warfare Syst. Command, San Diego, CA, Mar. 2, 2012.
135. "Energy-Harnessing Microchips," IEEE Power Electronics Soc. & IEEE Life Members, Atlanta, GA, Mar. 28, 2012.
136. "Harvesting Kinetic Energy in Miniaturized Syst.," Texas Instruments, Dallas, TX, Jun. 5, 2012.
137. "Harnessing Ambient Energy with Integrated Circuits," Nat. Cheng Kung Univ., Tainan, Taiwan, Dec. 6, 2012.
138. "Des. of High-Performance Low-Dropout Regulator ICs," Nat. Cheng Kung Univ. & IEEE Circuits and Syst. Soc., Tainan, Taiwan, Dec. 17, 2013.

139. "Designing Tiny DC-Sourced Single-Inductor Charger–Supply ICs," Nat. Cheng Kung Univ., IEEE Circuits and Syst. Soc., & IEEE Solid-State Circuits Soc., Tainan, Taiwan, Dec. 18, 2013.
140. "Designing Tiny Energy-Harvesting Piezoelectric Chargers," IEEE Circuits and Syst. Soc., Nat. Sun Yat-Sen Univ., Kaohsiung, Taiwan, Dec. 19, 2013.
141. "Designing Tiny Energy-Harvesting Piezoelectric Chargers," IEEE Ind. Electronics Soc. & IEEE Power Electronics Soc., Nat. Taiwan Univ. of Science and Tech., Taipei, Taiwan, Dec. 20, 2013.
142. "Energizing & Powering Microsystems," Texas Instruments, Dallas, TX, May 8, 2014.
143. "Power-Supply Rejection in Amplifiers and LDOs," Nat. Cheng Kung Univ., Tainan, Taiwan, Nov. 19, 2014.
144. "Miniaturized Energy-Harvesting Piezoelectric Chargers," Nat. Cheng Kung Univ., Tainan, Taiwan, Nov. 20, 2014.
145. "Powering Microsensors," Department of Energy, Nat. Security Campus, Kansas City, Feb. 6, 2015.
146. "Tiny and Distant Inductively-Powered Battery Chargers," Nat. Cheng Kung Univ., Tainan IEEE Solid-State Circuits & Circuits and Syst. Soc., Tainan, Taiwan, Nov. 19, 2015.
147. "Energizing & Powering Microsystems," Department of Energy, Nat. Security Campus, Albuquerque, NM, Jan. 7, 2016.
148. "Energizing & Powering Microsystems," Khalifa Univ., Abu Dhabi, UAE, May 2, 2016.
149. "Energizing & Powering Microsystems," Texas Instruments, Dallas, TX, June 10, 2016.
150. "Energizing & Powering Microsystems," KTH Royal Inst. of Tech., Stockholm, Sweden, June 9, 2017.
151. "Energizing & Powering Microsystems," Nat. Cheng Kung Univ., IEEE Circuits and Syst. Soc., Tainan, Taiwan, Nov. 16, 2017.
152. "On-Chip Bias Currents," Nat. Cheng Kung Univ., IEEE Circuits and Syst. Soc., Tainan, Taiwan, Nov. 20, 2017.
153. "On-Chip Voltage References," Nat. Cheng Kung Univ., IEEE Circuits and Syst. Soc., Tainan, Taiwan, Nov. 21, 2017.
154. "Powering Microsystems," Analog Devices, Phoenix, AZ, Mar. 9, 2018.
155. "Energizing & Powering Wireless Microsensors," Texas A&M Univ., College Station, TX, Mar. 19, 2018.
156. "Energizing & Powering Microsystems," Texas Instruments, Dallas, TX, Jun. 15, 2018.
157. "Energizing & Powering Microsystems," Analog Devices, Milpitas, CA, Nov. 9, 2018.
158. "Energizing & Powering Microsystems," Univ. of Illinois at Urbana–Champaign, IL, Nov. 26, 2018.
159. "Powering Wireless Microsystems," Texas A&M Univ., College Station, TX, Nov. 20, 2020.
160. "Powering Wireless Microsystems," IEEE Power Electronics Chapter, Atlanta, GA, Dec. 4, 2020.
161. "Energizing & Powering Wireless/Portable Microelectronics," Analog Devices, Colorado Springs, CO, July 14, 2022.
162. "1-W Battery-Charging CMOS Buck Regulator," SRC/TxACE Seminar, Dallas, TX, July 22, 2022.

#### **F6. Panelist**

163. "Power Management for SoCs," IEEE VLSI Symp., Hawaii, Jun. 15–17, 2006.
164. "Non-Academic Routes Beyond the Eng. Ph.D.," Sloan Foundation, Atlanta, GA, Apr. 14, 2015.
165. "Res. Funding: A View from the Other Side," Univ. Center of Exemplary Mentoring, Atlanta, GA, Feb. 13, 2018.
166. "Flexible Career Navigation/Agility," Sloan Foundation, Atlanta, GA, Mar. 2022.

#### **F7. Artistic Performances (with audition)**

167. Tenor in *A Festival of Nine Lessons and Carols* (Concert). St. Rita's Contemporary Choir, Dallas, TX, Dec. 2000.
168. Tenor in *The American Folk Spirit: A Concert of Folk Songs, Hymns, and Spirituals* (Concert). Alpharetta Chamber Singers, Alpharetta, GA, Nov. 2001.
169. Tenor in *Refresh of 2002: Five Services of Preaching and Proclamation* (Concert). Alpharetta Chamber Singers, Alpharetta, GA, Jan. 2002.
170. Zebulon in *Joseph and the Amazing Technicolor Dreamcoat* (Musical). Christ the King Theatre Ministry, Atlanta, GA, Apr. 2002.
171. Bernardo in *West Side Story* (Musical). Cobb Playhouse/Little General, Marietta, GA, Sept. 2002.
172. Tenor in *Mass of Remembrance* (Concert). Holy Spirit's Traditional Choir, Atlanta, GA, Nov. 2002.
173. Tenor in *Expressions of Praise* (Concert). Alpharetta Chamber Singers, Alpharetta, GA, Nov. 2002.
174. Homer Smith in *Lilies of the Field* (Play). Gwinnett County Seat Players, Lawrenceville, GA, Feb. 2003.
175. Tenor in *Mass of a New Millennium* (Concert). Alpharetta Chamber Singers, Alpharetta, GA, Apr. 2003.



176. Soldier in the *Sound of Music* (Musical). Christ the King Theatre Ministry, Atlanta, GA, Apr. 2003.
177. Tenor in *Sing a Song of Shakespeare* (Concert). Alpharetta Chamber Singers, Alpharetta, GA, May 2003.
178. Tenor in *Magnificat* (Concert). Archdiocesan Festival Choir, Atlanta, GA, May 2003.
179. Sid Philips in *Singin' in the Rain* (Musical). Marietta First Methodist Church, Marietta, GA, Jul. 2003.
180. Jimmy Luv in *Snuff Darlings from Dahlonaga* (Play). Art Farm, Cabbage Town, GA, Aug. 2003.
181. Henry Steward in *Civil War* (Musical). Neighborhood Playhouse, Decatur, GA, Sept. 2003.
182. Tenor in *Wonder Tidings* (Concert). Alpharetta Chamber Singers, Alpharetta, GA, Dec. 2003.
183. Fred Casely in *Chicago* (Musical). Theatre Arts Guild, Clarkston, GA, Feb. 2004.
184. Soldier, Guard, and Servant in *Life is a Dream/La Vida es Sueño* (Play: Performed in English and Spanish), Aurora Theatre, Duluth, GA, Apr. 2004.
185. Paco in *Man of La Mancha* (Musical). Corpus Christi Theatre Ministry, Stone Mountain, GA, Oct. 2004.
186. Tommy Keeler in *Annie Get Your Gun* (Musical). ACT 1, Alpharetta, GA Nov.–Dec. 2004.
187. Martinez in *Take Me Out* (Play). Theatre in the Square, Marietta, GA, Mar.–Apr. 2005.
188. Ali Hakim in *Oklahoma* (Musical). Christ the King Theatre Ministry, Atlanta, GA, Mar.–Apr. 2006.
189. Boxhall in *Titanic* (Musical). Stage 2 Players, Roswell, GA, Oct. 2006.
190. Roberto Nuñez & Charlie Blossom in *Working* (Musical). Theatre Arts Guild, Clarkston, GA, Oct.–Nov. 2006.
191. Tenor in St. Rita's Contemporary Choir, Dallas, TX, 1999–2001.
192. Tenor in Alpharetta Chamber Singers, Alpharetta, GA, 2001–2004.
193. Tenor in Holy Spirit's Traditional Choir, Atlanta, GA, 2001–2004.
194. Tenor in Archdiocesan Festival Choir, Atlanta, GA, 2002–2004.
195. Tenor in Sacred Heart's Spanish Choir, Atlanta, GA, 2004–2005.

## IV. Education

### A. Courses Developed

#### A1. University Courses (at Georgia Tech)

1. ECE 3400 Analog Electronics (updated/re-developed)
2. ECE 4803 Energy/Power Microelectronics
3. ECE 6412 Analog Integrated Circuit Design (updated/re-developed)
4. ECE 6445 Power IC Design

#### A2. Professional Courses

5. Power Management ICs
6. CMOS Analog Integrated Circuits
7. Bandgap Voltage References
8. Linear Regulators
9. Energy Harvesters

### B. Courses Taught (at Georgia Tech)

1. ECE 3040 Microelectronic Circuits: Sp. '02, '03.
2. ECE 3050/3400 Analog Electronics: Fa. '01, '02, '03, '04, '05, '06, '07, '10, Sp. '05, '06, '20, '21, '22.
3. ECE 4430 Analog Integrated Circuits: Fa. '02, '03.
4. ECE 4803 Energy/Power Microelectronics: Su. '18.
5. ECE 6412 Analog Integrated Circuit Design: Sp. '04, '07, '08, '09, '10, '11, '12, '13, '14, '15, '16, '17, '18, '19, '20, '21, '22; at GT-Shanghai in Fa. '08, '11, '13; & GT-Shenzhen in Fa. '14, '16, '18.
6. ECE 6445 Power IC Design: Su. '15, Fa. '22; at GT-Shanghai in Fa. '09, '12; & at GT-Shenzhen in Fa. '15, '17, '19, '21.

### C. Individual Student Guidance (at Georgia Tech)

#### C1. Ph.D. Students

1. Biranchi Sahu, *Dynamically Adaptive Supplies for Linear RF Power Amplifiers*, Ph.D. Dec. 2004.
2. Pooya Forghani, *Lossless Current-Sensor IC for Switching DC-DC Converters*, Ph.D. Jun. 1, 2006.

3. Vishal Gupta, *An Accurate, Trimless, High PSRR, Low-Voltage, CMOS Reference IC*, Ph.D. Jul. 3, 2007.
4. Neeraj Keskar, *High-Bandwidth, Wide LC- $R_{ESR}$  Compliant  $\Sigma\Delta$  Boost DC-DC Converters*, Ph.D., Mar. 24, 2008.
5. Erick O. Torres, *An Electrostatic CMOS/BiCMOS Vibration-Based Harvester-Charger IC*, Ph.D., May 4, 2010.
6. Dongwon Kwon, *Piezoelectric Kinetic Energy-Harvesting ICs*, Ph.D., Mar. 4, 2013.
7. Orlando Lazaro, *CMOS Inductively Coupled Power Receiver for Wireless Microsensors*, Ph.D., Apr. 2, 2014.
8. Suhwan Kim, *Mixed-Source Charger-Supply CMOS IC*, Ph.D., Apr. 14, 2014.
9. Andrés Arturo Blanco, *Fast-Waking & Low-Voltage Thermoelectric & Photovoltaic CMOS Chargers for Energy-Harvesting Wireless Microsensors*, Ph.D., Jul. 14, 2017.
10. Rajiv Damodaran Prabha, *Light-Harvesting Photovoltaic Charger-Supply Microsystems*, Ph.D., Dec. 7, 2017.
11. Carlos Javier Solís, *Battery-Sourced Switched-Inductor Multiple-Output CMOS Power-Supply Syst.*, Ph.D., Apr. 3, 2018.
12. Nan Xing, *Inductively Coupled Charger*, Ph.D., Apr. 3, 2020.
13. Siyu Yang, *Piezoelectric Energy-Harvesting Chargers*, Ph.D., Oct. 21, 2020.
14. Tianyu Chang, *Thermoelectric Battery-Charging Voltage Regulators for IoT Microsensors*. Ph.D., Sep. 23, 2022.
15. Guillaume Guérin, *Energy-Saving Switched-Inductor Power Supply*. Start: Su. '19, Pre. Exam: Sp. '18, Proposal: Su. '21.
16. Michael Isaf, *Energy-Harvesting CMOS Power Supplies*. Start: Fa. '21.
17. Xi Li, *Thermoelectric MPP-Tracking Battery-Charging Voltage Regulator*. Start: Sp. '22.
18. Linyuan Cui, *Battery-Charging Voltage Regulator*. Start: Su. '22.
19. Yucen Yan, *Energy-Harvesting Chargers*. Start: Sp. '23.

## C2. M.S. Students

20. Mark Guildersleeve, *Low Voltage Power Saving Techniques for DC-DC Converters*, M.S.E.E., Aug. 2002.
21. Abbas Poonawala, *Precision, Low-Voltage, Integrated Capacitor Multipliers*, M.S.E.E., Dec. 2003.
22. Aditya Makharia, *Inductorless DC-DC Converters for Portable Appl.*, M.S.E.E., Dec. 2003.
23. Oscar Palomino, M.S.E.E., Dec. 2007.
24. Amisha Manek, M.S.E.E., Dec. 2008.
25. Justin Vogt, *nW Analog-Digital Converter for Blood-Glucose Monitors*, M.S.E.E., Dec. 2008.
26. Amit Patel, *"High PSR Low Dropout Regulator ICs,"* M.S.E.E., May 2009.
27. Priyanka Lakhe, M.S., May 2010.
28. Luke Milner, M.S., May 2010.
29. Tim Guglielmo, M.S., May 2011.
30. José Vidal, M.S., May 2011.
31. Joshua Cowan, M.S., Dec. 2013.
32. Jun-Yang Lei, M.S., Dec. 2014.
33. Amy Wilson, *Electrostatic Energy-Harvesting CMOS Charger ICs*, M.S., Dec. 2017.
34. Pengyu Gu, M.S., 2020.
35. Sowmya Sankaranarayanan, M.S. 2021.
36. Avinash Dinesh, M.S. 2021.
37. Vasu Gupta, *Dimming DC-DC LED Drivers: Power Losses, Luminous Efficiency & Best-in-Class*, M.S. 2021.
38. Qian Zhi, *Battery-Charging Voltage Regulator*, M.S. 2022.
39. Qiwei Chen, *Hybrid Buck-Boost Power Supplies*, M.S. 2023.
40. Utsav Vasudevan, *High-PSR Low-Dropout Regulator*, M.S. 2023.

## C3. B.S. Students

41. R. Dokania (Su. '02), *Cancellation of Load Regulation in Low Drop-out Regulators*.
42. K. Dash (Su. '03), *Active Bulk Capacitor Multipliers*.
43. Carlos Cubero Ponce (Su. '05), *Drain Follower Buffer*.
44. Freddie Alequín Ramos (Su. '07), *Syst.-in-Package Integration*.
45. LaVonda Brown (Su. '08), *Piezoelectric Modeling*.

46. Adilson Cardoso (Fa. '06–Fa. '07).

#### C4. Visiting Scholars

47. H.I. Pan (from the Univ. of Taiwan: Jan. to Dec. 2005), *Asynchronous Power-Tracking Supplies for RF PAs*.

#### C5. Service on M.S. Thesis and Ph.D. Dissertation Committees:

##### C5a. Georgia Tech

	Student	Proposal Committee	Reading Committee	Defense Committee	Degree
1	Sidharth Dalmia	Chair: 3/14/02			Ph.D.
2	Zhiwei Dong		Member: 7/15/02	Member: 7/15/02	Ph.D.
3	Theocharis Boukas	Chair: 8/12/02		Member: 03/26/03	Ph.D.
4	Susanta Sengupta	Member: 4/15/02	Member: 07/08/04	Member: 07/08/04	Ph.D.
5	Kyu-won Choi	Chair: 10/29/02	Member: 09/09/03	Member: 09/09/03	Ph.D.
6	Woopoung Kim	Chair: 4/30/03			Ph.D.
7	Biranchinath Sahu	Advisor: 3/24/04	Chair: 11/4/04	Chair: 11/4/04	Ph.D.
8	Bhyrav Mutnury	Member: 1/28/05			Ph.D.
9	Pooya Forghani	Advisor: 6/24/04	Chair: 6/1/06	Chair: 6/1/06	Ph.D.
10	Vishal Gupta	Advisor: 9/20/05	Chair: 7/3/07	Chair: 7/3/07	Ph.D.
11	Neeraj Keskar	Advisor: 9/20/05	Chair: 3/24/08	Chair: 3/24/08	Ph.D.
12	Jau-Hong Chen	Chair: 9/22/05	Member: 5/25/06	Member: 06/30/06	Ph.D.
13	Soumendu Bhattacharya			Member: 06/23/05	Ph.D.
14	Jacob Minz	Member: 10/19/05		Member: 07/19/06	Ph.D.
15	Shruti Prakash	Member: 7/27/06	Member: 03/04/09	Member: 03/04/09	Ph.D.
16	Kenta Nakayashiki	Member: 9/28/06	Member: 10/2/07	Member: 10/2/07	Ph.D.
17	Ripal Nathuji	Member: 5/2/07			Ph.D.
18	Rajeswari Chandrasekaran	Member: 08/22/07		Member: 7/15/10	Ph.D.
19	David Pritchett	Member: 12/13/07		Member: 2/4/09	Ph.D.
20	N. Lalgudi Subramanian	Member: 1/17/07		Member: 3/26/08	Ph.D.
21	Erick Torres	Advisor: 4/9/08	Chair: 5/4/10	Chair: 5/4/10	Ph.D.
22	Krishna Bharath	Member: 4/21/08			Ph.D.
23	Muhammad Nisar	Member: 7/30/08			Ph.D.
24	Dale Scott Douglas		Member: Fall 08		M.S.
25	Tahir Zaidi	Member: 6/1/09			Ph.D.
26	Luke Milner	Advisor: 7/15/09			Ph.D.
27	Suhwan Kim	Advisor: 3/13/11	Chair: 4/14/14	Chair: 4/14/14	Ph.D.
28	Sang Taek Han	Member: 3/3/11			Ph.D.
29	Mauricio Pardo Gonzalez	Chair: 4/29/11	Member: 1/18/12	Member: 1/18/12	Ph.D.
30	Debrup Das	Member: 6/1/11			Ph.D.
31	Dongwon Kwon	Advisor: 7/21/11	Chair: 3/4/13	Chair: 3/4/13	Ph.D.
32	Hengzhao Yang	Member: 4/24/12		Member: 5/2/13	Ph.D.
33	Hakan Toreyin	Member: 11/25/12			Ph.D.
34	Orlando Lazaro	Advisor: 7/23/12	Chair: 4/2/14	Chair: 4/2/14	Ph.D.
35	Chris Valenta	Member: 7/25/12		Member: 6/25/14	Ph.D.
36	Jae Won Shim	Member: 3/13/13			Ph.D.
37	Yaesuk Jeong	Member: 7/24/14	Member: 5/11/17	Member: 5/11/17	Ph.D.
38	Andres Blanco	Advisor: 8/21/14	Chair: 7/14/17	Chair: 7/14/17	Ph.D.
39	Rajiv Damodaran	Advisor: 6/22/15	Chair: 12/7/17	Chair: 12/7/17	Ph.D.
40	Carlos Solís	Advisor: 1/27/16	Chair: 4/3/18	Chair: 4/3/18	Ph.D.
41	Jaemyum Lim	Chair: 3/16/16	Member: 3/16/17	Member: 3/16/17	Ph.D.
42	Nan Xing	Advisor: 4/16/18	Chair: 3/12/20	Chair: 4/3/20	Ph.D.
43	Siyu Yang	Advisor: 7/13/18	Chair: 8/21/20	Chair: 10/21/20	Ph.D.
44	Aniruddh Marellapudi		Member: 8/17/20		M.S.
45	Tianyu Chang	Advisor: 8/20/20	Chair: 8/26/22	Chair: 9/23/22	Ph.D.
46	Guillaume Guerin	Advisor: 7/27/21			Ph.D.
47	Vasu Gupta		Advisor: 12/9/21		M.S.
48	Blake Capella		Member: 6/6/22		M.S.

49	Qian Zhi		Advisor: 12/12/22	M.S.
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### C5b. International Ph.D. Committees

1. [Rapporteur, Jury] Vincent Telandro, *On-Chip Voltage Regulator Protecting Against Power Analysis Attacks*, Laboratoire Matériaux et Microélectronique de Provence, Institut Supérieur d'Electronique du Nord, France, Nov. 2007.
2. [External Examiner, Chair] Mohammad Radwan Alhawari, *Multi-Source Energy-Harvesting Interface Circuits for Biomedical Wearable Electronics*, Khalifa Univ., Abu Dhabi, United Arab Emirates, May 2, 2016.
3. [Examiner, Opponent] Janko Katic, *Efficient Energy Harvesting Interfaces for Implantable Appl.*, KTH Royal Inst. of Tech., Stockholm, Sweden, June 9, 2017.
4. [Member, Jury] Youssef Driouich, *Model Checking Cyber-Physical Systems*, Università degli Studi Di Salerno, Salerno, Italy, March 29, 2019.
5. [Member, Jury] Kateryna Stoyka, *Methods and Algorithms for Behavioral Modeling of Ferrite Power Inductors*, Università degli Studi Di Salerno, Salerno, Italy, March 29, 2019.

## V. Service

### A. Professional Contributions

#### A1. Professional Leadership

6. Chapter Vice-Chair, Atlanta's IEEE Solid-State Circuits and Circuits and Syst. Soc., 2003–2004.
7. Chapter Chair, Atlanta's IEEE Solid-State Circuits and Circuits and Syst. Soc., 2004–2011.
8. Technical Program Co-Chair, IEEE Midwest Symp. on Circuits and Syst., Puerto Rico, 2006.
9. Technical Program Chair, Joint IEEE Midwest Symp. on Circuits and Syst./Int. NEWCAS Conf., Canada, 2007.
10. Circuit Des. Vice Chair, IEEE Int. Caribbean Conf. on Devices, Circuits and Syst., Mexico, 2008.
11. General Chair, Energy & Power IC Workshop, SRC Texas Analog Center of Excellence, Sept. 28-29, 2009.
12. Special Session Co-Organizer, "Emerging Energy/Power ICs," IEEE Int. Symp. on Circuits and Syst., Brazil, May 2011.
13. Technical Program Co-Chair, IEEE Int. Syst.-on-Chip Conf., Korea, Nov. 2011.
14. Advisory Panel, IEEE Int. Conf. on Power Electronics and Energy Syst., India, 2012.
15. Technical Program Committee, IEEE Faible Tension Faible Consommation, France, 2013–2014.
16. Int. Advisory Board, IEEE Int. Conf. on Power Electronics and Drive Syst., Japan, 2013.
17. General Co-Chair, IEEE Int. Syst.-on-Chip Conf., Korea, Nov. 2013.
18. General Vice Chair, IEEE Int. Syst.-on-Chip Conf., Korea, Nov. 2014.
19. Int. Steering Committee, Int. Future Energy Electronics Conf., Taiwan, Nov. 2015.
20. Technical Program Chair, IEEE Int. Symp. on Circuits and Syst., Canada, May 2016.
21. Int. Liaison, IEEE Conf. on Des. of Circuits and Integrated Syst., España, Nov. 2017.
22. Technical Program Co-Chair, IEEE Int. Symp. on Circuits and Syst., Japan, May 2019.
23. Technical Program Co-Chair, IEEE Int. Symp. on Circuits and Syst., S. Korea, May 2021.

#### A2. Editorial Boards

24. Guest Co-Editor, *Analog Integrated Circuits and Signal Processing J.*, Special Issue on Analog and RF, Aug. 2009.
25. Associate Editor, *IEEE Trans. on Circuits and Syst. II*, 2007–2009 and 2010–2011.
26. Associate Editor, *IEEE J. of Solid-State Circuits*, 2011.
27. Editorial Board Member, *J. of Low-Power Electronics*, 2009–2018.
28. Guest Editor, *IEEE Trans. on Circuits and Syst. II*, Special Issue on Energy Harvesting, Dec. 2011.

#### A3. Committee Memberships

29. Technical Program Committee, IEEE Southwest Symp. on Mixed-Signal Des., 2002.
30. Selection Committee Review Panel, NSF SBIR/STTR Committee on Power Management, Mar. 2003.
31. Selection Committee Review Panel, NSF SBIR/STTR Committee on Power Management, Sept. 2003.
32. Technical Committee, IEEE CASS Analog Signal Processing, since 2003.
33. Selection Committee Review Panel, NSF SBIR/STTR Committee on Signal Processing & IC Des., Oct. 2004.

34. Selection Committee Review Panel, NSF SBIR/STTR Committee on IC Des.: Testing, Aug. 2005.
35. Steering Committee, IEEE Midwest Symp. on Circuits and Syst., since 2006.
36. Selection Committee Review Panel, NSF SBIR/STTR Committee on IC Des. I, Feb. 2007.
37. Technical Committee, IEEE CASS Power and Energy Circuits and Syst., since 2009.
38. Fellows Evaluation Committee, IEEE Circuits and Syst. Soc., 2011 and 2014.
39. Distinguished Lecturer Committee, IEEE Circuits and Syst. Soc., 2011–2013.
40. Ind. Advisory Committee, IEEE Circuits and Syst. Soc., 2012–2013, 2014–2015.
41. Steering Committee, IEEE Int. Symp. on Circuits and Syst., 2016–2017.

#### A4. Professional Memberships

42. Inst. of Electrical and Electronics Engineers: Student '90, Member '97, Sr. Member '01, Fellow '11.
43. Institution of Eng. and Tech.: Member '06, Fellow '09.
44. Soc. of Hispanic Professional Engineers: Life Member '00.
45. American Association for the Advancement of Science: Member '21.

#### B. Community Service

1. Volunteers for Peace (VFP), Kigonigoni, Tanzania (school and levy construction), Su. '06.
2. Volunteers for Peace (VFP), Bangalore, India (taught children with AIDS and disabilities), Su. '08.
3. Service Civil Int. (SCI), Ulaan Baatar, Mongolia (construction and farming at orphanage), Su. '09.
4. Service Civil Int. (SCI) in Viet Tri, Vietnam (taught orphans English), Su. '10.

#### C. Institute Contributions (at Georgia Tech)

1. Adjunct Professor, School of Electrical & Comp. Eng. (ECE), 1999–2001: Advised M.S./Ph.D. students.
2. Director, Georgia Tech Analog Consortium (GTAC), 2001–2004: Membership funds from Analog Devices, Raytheon, RF Micro-Devices, Intersil, Schlumberger, Adtran, Texas Instruments, and ON Semiconductor used to support over 50 M.S./Ph.D. students for EDA faculty.
3. Director, TI Analog Fellowship Program, 2001–2015: Supported over 100 M.S./Ph.D. students for EDA faculty.
4. Chair, GT's IEEE SSCS–CASS Chapter, 2004–2011: Invited/coordinated/hosted IEEE Distinguished Lecturers.
5. Chair, ECE Student–Faculty Committee, 2008–2011.
6. On-site Professor, GT-Shanghai/Shenzhen, 2008–Present: Teach ECE 6412 & ECE 6445 for GT in China.
7. Chair, Electronic Design & Applications (EDA) Faculty, 2013–2016, 2022–2023.
8. Faculty Recruitment Representative, Electronic Design & Applications (EDA) Faculty, 2016–2017.
9. Graduate Student Recruitment Representative, Electronic Design & Applications (EDA) Faculty, 2017–2021.
10. College of Engineering's (CoE) Diversity, Equity, and Inclusion (DEI) Council, 2021–2023.
11. College of Engineering's (CoE) External Relations Sub-Committee, 2021–2022.
12. Committee Membership:
  - ECE Graduate Student Recruitment Committee, 2001–2003, 2004–2005.
  - ECE Student–Faculty Committee, 2003–2012, 2021–2022.
  - ECE Student Award Committee, 2006.
  - ECE Georgia Power Distinguished Professor Search Committee, 2006.
  - Freshmen Partner for Freshmen Partnership Program, 2006.
  - ECE Student Awards Committee, 2009–2011.
  - ECE Course Content Review Panel for ECE 3040, 2015.
  - ECE Chair Search Committee, 2021.

## VI. Honors and Awards

#### A. Elevations and Elections

1. One of "The 100 Most Influential Hispanics," *Hispanic Business*, 2000.
2. Sr. Member, Inst. of Electrical and Electronics Engineers, 2001.
3. Fellow, Institution of Eng. and Tech., 2009. (Less than 5% of members earn rank of Fellow.)
4. Distinguished Lecturer, IEEE Circuits and Syst. Soc., 2009–2010.

5. Fellow, Inst. of Electrical and Electronics Engineers, 2011. (Less than 1% of members earn rank of Fellow.)
6. Included in "List of Notable Venezuelan Americans" in Science, 2014.
7. Fellow, National Academy of Inventors, 2017.
8. Distinguished Lecturer, IEEE Circuits and Syst. Soc., 2018–2019.
9. Distinguished Lecturer, IEEE Circuits and Syst. Soc., 2022–2023.
10. Motorola Solutions Foundation Professor, Georgia Inst. of Tech., 2022.

#### **B. Awards**

11. Three-Year Patent Award for U.S. 5491437, U.S. 5500625, & U.S. 5519341, Texas Instruments, 1999.
12. Charles E. Perry Visionary Award, Florida Int. Univ., 2000.
13. Council of Outstanding Young Eng. Alumni Inductee, Georgia Inst. of Tech., 2000.
14. Hispanic in Technology Award, Soc. of Hispanic Professional Engineers, 2000.
15. State of California Commendation Certificate from Lieutenant Governor Cruz M. Bustamante, 2001.
16. Orgullo Hispano Award, Robins Air Force Base, Sep. 23, 2003.
17. Hispanic Heritage Award, Robins Air Force Base, 2005.
18. IEEE Service Award, MWSCAS–NEWCAS, 2007.

#### **C. Magazine Covers** (Mag. with Prof. Rincón-Mora on their cover.)

19. "Bravo – National Award Winners," *Official Magazine of the Soc. of Hispanic Professional Engineers*, Sp. 2000.
20. "The 100 Most Influential Hispanics," *Hispanic Business*, Oct. 2000.
21. "A high-tech engineer with a low-tech lifestyle," *La Fuente* (Dallas publication), Mar. 2000.
22. "Gabriel Rincón-Mora - Impacta en la alta tecnología," *Nuevo Impacto* (Atlanta publication), Aug. 2002.
23. "Profesionales Latinos – La nueva cara de Georgia," *Nuevo Impacto* (Atlanta publication), Oct. 2003.
24. "Gabriel Rincón Mora – Outstanding engineer and author," *Nuevo Impacto* (Atlanta publication), Nov. 2004.

#### **D. Feature Stories** (on Prof. Rincón-Mora)

25. "Passion for design, apathy for gizmos," *Electronic Engineering Times*, Jun. 2000.
26. "Designer has passion for work, apathy for gizmos," *Planet Analog*, Jun. 2000.
27. "By Day an Engineer," *Intown* (Atlanta publication), Aug. 2002.
28. "World-class training workshop on analog IC power management by top Integrated Circuit (IC) expert from the United States," *Hong Kong Science & Tech. Parks News & Newslett.*, Oct. 2003.
29. "Alumni Profile: Gabriel A. Rincón-Mora," *Summa Cum Laude*, Florida Int. Univ. Honors College, vol. 1, no. 3, 2011.
30. "Featured Engineer: Gabriel Alfonso Rincón-Mora," *EEWeb – Electrical Eng. Community*, Nov. 2012.

#### **E. Recognitions**

31. HENAAC Role Model of the Week, Hispanic Engineer Nat. Achievement Awards Corp., Jul. 5, 2005.
32. TIDN Forum's Significant TI Contributor, Texas Instruments, 1999.
33. "Notar – Short Stories and Poems to Boot," *Official Mag. of the Soc. of Hispanic Professional Engineers*, Aug. 2002.
34. "Innovators Matter," *Hispanic Business*, Sept. 2002.
35. "Innovators Matter," *Hispanic Business*, Dec. 2002.
36. "Hispanic Eng. Talent," *Georgia Tech Soc. of Professional Hispanic Engineers*, Feb. 2003.
37. "SSCS Subsidizes Short Course on Linear Regulator Des. in Taipei," *IEEE Solid-State Circuits Soc. Newslett.*, Sep. 2006.
38. IEEE Plaque of Appreciation, IEEE APCCAS, 2009.
39. IEEE CAS Certificate of Appreciation, IEEE Circuits and Syst. Soc., 2009.
40. IEEE Plaque of Appreciation, IEEE ISOCC, 2009.
41. Thanks for Being a Great Teacher certificate, Georgia Inst. of Tech., 2010.
42. Certificate of Appreciation, IEEE Circuits and Syst. Soc., 2010.
43. Certificate of Appreciation, IEEE Circuits and Syst. Soc., 2011.
44. Thanks for Being a Great Teacher certificate, Georgia Inst. of Tech., 2012.
45. Certificate of Appreciation, Inst. of Electrical and Electronics Engineers, 2012.

46. Certificate of Appreciation, IEEE Circuits and Syst. Soc., 2012.
47. Certificate of Appreciation, IEEE Ind. Electronics Soc./Power Electronics Soc./IEEE Ind. App. Soc., 2013.
48. "List of Notable Venezuelan Americans" in Science, 2014.
49. NTU/Mediatek Plaque, Nanyang Technological Univ., Singapore, 2016.
50. Plaque of Appreciation, IEEE ISOCC, 2016.
51. Thanks for Being a Great Teacher certificate, Georgia Inst. of Tech., 2018.
52. Thanks for Being a Great Teacher certificate, Georgia Inst. of Tech., 2019.
53. Thanks for Being a Great Teacher certificate, Georgia Inst. of Tech., 2020.
54. Thanks for Being an Excellent Teacher certificate, Georgia Inst. of Tech., 2022.

#### **F. Product/Book/Article Distinctions**

55. "Top 100 Products" of 1998 by *EDN* (on the cover of *Electronic Des.*) for TPS5210.
56. Top 7 Most Cited IEEE TCAS II '98 Paper: "Designing 1V Op Amps Using Standard Digital CMOS Technology," *IEEE Trans. on Circuits and Syst. II*, vol. 45, no. 7, pp. 769–780, Jul. 1998.
57. Top 25 Most Downloaded IEEE TCAS II '02 Paper: "A low voltage, rail-to-rail, class AB CMOS amplifier with highdrive and low output impedance characteristics," *IEEE Trans. on Circuits and Syst. II*, vol. 48, no. 8, pp. 753–761, Aug. 2001.
58. Top 200 Most Downloaded IEEE '04 Paper: "A High-Efficiency Linear RF Power Amplifier With a Power-Tracking Dynamically Adaptive Buck–Boost Supply," *IEEE Trans. Microw. Theory Techn.*, vol. 52, no. 1, pp. 112–120, Jan. 2004.
59. "7<sup>th</sup> Most Read Power Management Des. Line How-To Article in 2005": "Power Supply Ripple Rejection and Linear Regulators: What's all the noise about?" *Power Management Des. Line*, Sept. 20, 2005.
60. "2<sup>nd</sup> Most Read Power Management Des. Line How-To Article in 2006": "Harvesting energy into lithium-ion batteries," *Power Management Des. Line*, Feb. 14, 2006.
61. 2<sup>nd</sup> Place Award, '09 Science App. Int. Corp.'s Georgia Tech Paper Competition: "A Rectifier-Free Piezoelectric Energy Harvester Circuit."
62. 2<sup>nd</sup> best seller, IEEE Int. Solid-State Circuits Conf. '09: *Analog IC Des. with Low-Dropout Regulators*.
63. 3<sup>rd</sup> Best in Show, IEEE Int. Solid-State Circuits Conf. '14: *Analog IC Des. with Low-Dropout Regulators, 2<sup>nd</sup> Edition*.

#### **G. Academic Distinctions**

64. *Presidential Academic Fitness Award*, (signed by President George Bush, Sr.), 1989.
65. *Insignis Scholarship*, Univ. of Detroit, 1989.
66. *Dean's List*, Florida Int. Univ., 1989–1992.
67. *Florida Undergraduate Scholars Fund Scholarship*, State of Florida, 1989–1992.
68. *Faculty Scholars Scholarship*, Florida Int. Univ., 1989–1992.
69. *Honorary Award Recognition*, Nat. Dean's List, 1990–1992.
70. *Phi Kappa Phi* (honor society), Florida Int. Univ., 1991.
71. *Eta Kappa Nu* (nat. electrical eng. honor society), Florida Int. Univ., 1992.
72. *B.S.E.E. Magna Cum Laude*, Florida Int. Univ., 1992.
73. *Honorable Mention*, Nat. Science Foundation, 1993.
74. *Tau Beta Pi* (nat. eng. honor society), Georgia Inst. of Tech., 1994.
75. *Outstanding Ph.D. Graduate*, Georgia Inst. of Tech., 1996.