

CURRICULUM VITA

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

School of Electrical and Computer Engineering

Georgia Institute of Technology

Georgia Tech Analog, Power, and Energy Research
Rincon-Mora@gatech.edu, <http://www.Rincon-Mora.com>

I. Earned Degrees

B.S., Electrical Engineering, Florida International University (GPA 3.83, Faculty Scholar, FL Undergraduate Scholar, High Honors), 1992

M.S., Electrical Engineering (Minor in Mathematics), Georgia Institute of Technology (GPA 3.82), 1994

Ph.D., Electrical Engineering (Minor in Mathematics), Georgia Institute of Technology (Outstanding Ph.D. Graduate), 1996

II. Employment

Electrical Engineer and Laboratory System Specialist, Fiberworld Conference Center, Northern Telecom, 1993

Analog IC Design Engineer, Standard Linear Group, 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 Engineering, Georgia Institute of Technology, 1999-2001

Senior Analog IC Design Consultant, Texas Instruments, 2003-2004

Assistant Professor, Electrical and Computer Engineering, Georgia Institute of Technology, 2001-2007

Director, Georgia Tech Analog Consortium, Georgia Institute of Technology, 2001-2003

Director, TI Analog Fellowship Program, Georgia Institute of Technology, 2001-Present

Associate Professor with Tenure, Electrical and Computer Engineering, Georgia Institute of Technology, 2007-Present

III. Teaching

A. Individual Student Guidance

Ph.D. Students Graduated

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 ($\Sigma\Delta$) Boost DC-DC Switching Converters*, Ph.D., Mar. 24, 2008.

Master Students Graduated

CURRICULUM VITA

1. Mark Guildersleeve, *Low Voltage Power Saving Techniques for DC-DC Converters*, M.S.E.E., Aug. 2002.
2. Abbas Poonawala, *Precision, Low-Voltage, Integrated Capacitor Multipliers*, M.S.E.E., Dec. 2003.
3. Aditya Makharia, *Inductorless DC-DC Converters for Portable Applications*, M.S.E.E., Dec. 2003.
4. Oscar Palomino, M.S.E.E., Dec. 2007.
5. Amisha Manek, M.S.E.E., Dec. 2008.
6. Amit Patel, Thesis: “*High PSR Low Dropout Regulator ICs*,” M.S.E.E., May 2009.

Current Graduate Students Advised

1. Suhwan Kim, *Micro-Scale SiP Fuel Cell and Thin-Film Li-Ion Polymer Supplies*.
Start: Fall '06, Passed Preliminary Exam: Fall 2005, Expected Grad.: Spring '12.
2. Erick Torres, *Micro-Scale Electrostatic SiP Energy Harvesters*.
Start: Fall '04, Passed Preliminary Exam: Fall '04, Expected Proposal: Spring '07, Expected Grad.: Fall '08.
3. Luke Milner, *SiP Inductor-Based Switching Supplies*.
Start: Spring '04, Passed Preliminary Exam: Spring '05, Proposal: Fall '09, Expected Grad.: Spring '11.
4. Justin Vogt, *CMOS Capacitor Sensor-Interface Chip*.
Start: Spring '06, Passed Preliminary Exam: Spring '06.
5. Dongwon Kwon, *Micro-Scale Piezoelectric Driver/Harvester IC*.
Start: Spring '07, Passed Preliminary Exam: Fall '06
6. Orlando Lazaro, *Dynamically Adaptive Switching Supply for RF PAs*.
Start: Fall '07, Passed Preliminary Exam: Fall '08
7. Rajiv Damodaran, *CMOS Light-Harvesting IC*,
Start: Fall '09, Passed Preliminary Exam: Spring '09
8. Priyanka Lakhe, M.S., Start: Spring '09.

Undergraduate Students Advised

1. R. Dokania (Intern from India: Summer '02), *Cancellation of Load Regulation in Low Drop-out Regulators*.
2. K. Dash (Intern from India: Summer '03), *Active Bulk Capacitor Multipliers*.
3. Carlos Cubero Ponce (Intern from University of Puerto Rico: Summer '05), *Drain Follower Buffer*.
4. Freddie Alequín Ramos (Intern from University of Puerto Rico: Summer '07), *System-in-Package Integration*.
5. LaVonda Brown (Intern from Norfolk: Summer '08), *Piezoelectric Modeling*.
6. Adilson Cardoso (Georgia Tech: Fall '06 – Fall '07).

Visiting Scholars

1. H.I. Pan (Ph.D. student from University of Taiwan in Taipei, Taiwan: Jan. to Dec. 2005), *Asynchronous Power-Tracking Supplies for RF PAs*.

Courses Taught (at Georgia Tech unless otherwise stated)

1. ECE-3040 – *Microelectronic Circuits*: Spring '02, '03.

CURRICULUM VITA

2. ECE-3050 – *Analog Electronics*: Fall '01, '02, '03, '04, '05, '06, '07, Spring '05, '06.
3. ECE-4430 – *Analog Integrated Circuits*: Fall '02, '03.
4. ECE-6412 – *Advanced Analog Integrated Circuit Design*: Spring '04, '07, '08, '09, Fall '08 (at Jiao Tong University in Shanghai), Spring '09, Spring '10.
5. ECE-8813 – *Power IC Design*: Fall '09.

IV. Scholarly Accomplishments

Ph.D. Dissertation

G.A. Rincón-Mora, *Current Efficient, Low Voltage, Low Dropout Regulators*. Georgia Institute of Technology, 1996 (Advisor: Phil Allen).

A. Published Books

1. G.A. Rincón-Mora, *Voltage References – From Diodes to Precision High-Order Bandgap Circuits*. New Jersey: IEEE Press and John Wiley & Sons, Inc., 2001 [Textbook].
2. G.A. Rincón-Mora, *Power Management ICs: A Top-Down Design Approach*. Lulu, 2005 [Slide Book].
3. G.A. Rincón-Mora, *Analog IC Design with Low-Dropout Regulators*. McGraw-Hill, Jan. 2009 [Textbook].
4. G.A. Rincón-Mora, *Analog IC Design: An Intuitive Approach*. Lulu, 2009 [Slide Book].
5. G.A. Rincón-Mora, *Power IC Design – From the Ground up*. Lulu, 2009 [Slide Book].
6. G.A. Rincón-Mora, *Short Stories and Poems to Boot!* New York: Vantage Press, 2001 [Short Stories/Poetry].
7. G.A. Rincón-Mora, *Triple Engagement – A Nomadic Storytelling Odyssey*. New York: iUniverse, 2004 [Short Stories/Poetry].
8. G.A. Rincón-Mora, *Vanish*. Lulu, 2009 [Novella].

A.2. Book Chapters

1. G.A. Rincón-Mora, "Harvesting Microelectronic Circuits," *Energy Harvesting Technologies* (Editors: S. Priya and D.J. Inman), Springer, Jan. 2009.
2. G.A. Rincón-Mora, "Powering Microsystems," *Emerging CMOS Technologies* (Editor: K. Iniewski), CRC Press [invited, in preparation].
3. G.A. Rincón-Mora, "Energizing and Powering Grid Microsensors," *Control of Smart Grid Systems* (Editor: A. Keyhani), Springer [invited, in preparation].

B. Refereed Publications

Journal Publications

1. G.A. Rincón-Mora and P.E. Allen, "A Low-Voltage, Low Quiescent Current, Low Drop-Out Regulator," *IEEE Journal 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 Transactions on Circuits and Systems 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 Transactions on Circuits and Systems II*, vol. 45, no. 7, pp. 769-780, Jul. 1998.

CURRICULUM VITA

4. G.A. Rincón-Mora and P.E. Allen, "A 1.1 V Current-Mode and Piecewise-Linear Curvature Corrected Bandgap Reference," *IEEE Journal 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 Journal 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 Transactions on Circuits and Systems 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 Transactions on Circuits and Systems 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 Transactions 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, Non-Inverting, Dynamic, Synchronous Buck-Boost Converter for Portable Applications," *IEEE Transactions 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 Transactions on Circuits and Systems II*, vol. 53, no. 4, pp. 294-298, Apr. 2006.
12. M. Chen and G.A. Rincón-Mora, "Accurate Electrical Battery Model Capable of Predicting Runtime and I-V Performance," *IEEE Transactions 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 Transactions on Circuits & Systems 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," *Journal 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 Transactions on Circuits and Systems 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- σ Mismatch with Minimum Channel-Length CMOS Devices," *IEEE Transactions on Circuits and Systems 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 Journal of Solid-State Circuits*, vol. 42, no. 3, pp. 665-679, Mar. 2007.
19. H.P. Forghani-zadeh and G.A. Rincón-Mora, "A strategy for fast and reliable top-level simulation and verification of mixed-signal DC-DC converter ICs," *IEE Proceedings on Circuits, Systems, and Devices*, vol. 1, no. 2, pp. 143-150, Apr. 2007.
20. H.P. Forghani-zadeh and G.A. Rincón-Mora, "A Programmable 210 μ V Offset Rail-to-Rail G_m -C filter," *IEEE Transactions on Circuits and Systems I*, vol. 54, no. 8, pp. 1636-1646, Aug. 2007.
21. V. Gupta and G.A. Rincón-Mora, "Low Output Impedance 0.6 μ m-CMOS Sub-Bandgap Reference," *IET Electronic Letters*, vol. 43, pp. 1085-1087, Sept. 2007.

CURRICULUM VITA

22. N. Keskar and G.A. Rincón-Mora, "A Fast, Sigma-Delta Boost DC-DC Converter Tolerant to Wide LC Filter Variations," *IEEE Transactions on Circuits and Systems (TCAS) II*, vol. 55, pp. 198-202, Feb. 2008.
23. N. Keskar and G.A. Rincón-Mora, "A Compact 1-30 μ H, 1-350 μ F, 5-50m Ω ESR Compliant, 1.5% Accurate 0.6 μ m CMOS Differential Sigma-Delta Boost DC-DC Converter," *Analog Integrated Circuits and Signal Processing (AICSP)*, vol. 54, No. 3, 2008, pp. 157-169.
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 Transactions on Energy Conversion*, vol. 23, no. 3, Sept. 2008, pp. 842-850.
25. E.O. Torres and G.A. Rincón-Mora, "Energy-harvesting system-in-package (SiP) microsystem," *ASCE Journal of Energy Engineering*, vol. 134, no. 4, Dec. 2008, pp. 121-129.
26. S. Kim and G.A. Rincón-Mora, "Achieving High Efficiency under Micro-Watt Loads with Switching Buck DC-DC Converters," *Journal of Low Power Electronics (JOLPE)*, vol. 5, no. 2, Aug. 2009.
27. D. Kwon and G.A. Rincón-Mora, "Single-Inductor Multiple-Output (SIMO) Switching DC-DC Converters," *IEEE Transactions on Circuits and Systems II (TCAS II)*, 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 Transactions on Circuits and Systems (TCAS) 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* [Accepted: Jan. '09].
30. V. Gupta and G.A. Rincón-Mora, "A Low-Impedance, Sub-Bandgap 0.6 μ m CMOS Reference with 0.84% Trimless 3- σ Accuracy and -30dB Worst-Case PSRR up to 50MHz," *Analog Integrated Circuits and Signal Processing (AICSP)* [Accepted: Jul. '09].
31. E.O. Torres and G.A. Rincón-Mora, "A 0.7 μ m BiCMOS Electrostatic Energy-Harvesting System IC," *IEEE Journal of Solid-State Circuits* [Accepted: Oct. '09].
32. L.A. Milner and G.A. Rincón-Mora, "A Feed-Forward 10x CMOS Current-Ripple Suppressor for Switching Power Supplies," *IEEE Transactions on Circuits and Systems (TCAS) II* [Accepted: Dec. '09].

Conference Publications

1. P.E. Allen, B.J. Blalock, and G.A. Rincón, "A 1V CMOS Op Amp Using Bulk-Driven MOSFETs," *IEEE's International Solid-State Circuits Conference (ISSCC)*, Session 11, pp. 192-193, San Francisco, California, 1995.
2. P.E. Allen, B.J. Blalock, and G.A. Rincón, "Low Voltage Analog Circuits Using Standard CMOS Technology," *IEEE's International Symposium on Low Power Design (ISLPD)*, pp. 209 - 214, Laguna, California, 1995.
3. B. Sahu and G.A. Rincón-Mora, "System-Level Requirements of DC-DC Converters for Dynamic Power Supplies of Power Amplifiers," *IEEE's Asia-Pacific Conference on ASICs (AP-ASIC)*, pp. 149-152, Taipei, Taiwan, 2002.
4. M. Gildersleeve, H.P. Forghani-zadeh, and G.A. Rincón-Mora, "A Comprehensive Power Analysis and a Highly Efficient, Mode-Hopping DC-DC Converter," *IEEE's Asia-Pacific Conference on ASICs (AP-ASIC)*, pp. 153-156, Taipei, Taiwan, 2002.
5. V. Gupta and G.A. Rincón-Mora, "Predicting the Effects of Error Sources in Bandgap Reference Circuits and Evaluating their Design Implications," *IEEE's Midwest Symposium on Circuits and Systems (MWSCAS)*, vol. 3, pp. 575-578, Tulsa, Oklahoma, 2002.
6. H.P. Forghani-zadeh and G.A. Rincón-Mora, "Current-Sensing Techniques for DC-DC Converters," *IEEE's 45th Midwest Symposium on Circuits and Systems (MWSCAS)*, vol. 2, pp. 577-580, Tulsa, Oklahoma, 2002.

CURRICULUM VITA

7. A. Makharia and G.A. Rincón-Mora, "Integrating Power Inductors onto the IC - SOC Implementation of Inductor Multipliers for DC-DC Converters," *IEEE's 29th Industrial Electronics Conference (IECON)*, vol. 1, pp. 556-561, Roanoke, Virginia, 2003.
8. V. Gupta, G. A. Rincón-Mora, and P. Raha, "Analysis and Design of Monolithic, High PSR, Linear Regulators for SoC Applications," *Proc. IEEE International System on Chip (SOC) Conference*, pp. 311-315, Santa Clara, California, 2004.
9. N.A. Keskar and G.A. Rincón-Mora, "Self-Stabilizing, Integrated, Hysteretic Boost DC-DC Converter," *IEEE Industrial Electronics Conference (IECON)*, TA3-4, vol. 1, pp. 586-591, Busan, Korea, Nov. 2-6, 2004.
10. M. Chen and G.A. Rincón-Mora, "A Self-Powered, Self-Sustaining System-on-Chip (SOC) Solution Powered from Hybrid Micro-Fuel Cells," *24th Army Science Conference*, Orlando, Florida, Nov. 28 - Dec. 2, 2004.
11. B. Sahu and G.A. Rincón-Mora, "Adaptive Power Management of Linear RF Power Amplifiers- An Integrated System Design Approach," *2004 IEEE Asia-Pacific Microwave Conference (APMC)*, New Delhi, India, Dec. 15-18, 2004.
12. B. Sahu and G.A. Rincón-Mora, "A high-efficiency, dual-mode, dynamic, buck-boost power supply IC for portable applications," *IEEE International Conference on VLSI Design*, pp. 858-861, Kolkata, India, Jan. 2005.
13. V. Gupta and G.A. Rincón-Mora, "Predicting and Designing for the Impact of Process Variations and Mismatch on the Trim Range and Yield of Bandgap References," *IEEE International Symposium on Quality Electronic Design*, pp. 503-508, Santa Clara, California, 2005.
14. V. Gupta and G.A. Rincón-Mora, "A Low Dropout, CMOS Regulator with High PSR over Wideband Frequencies," *IEEE International Symposium on Circuits and Systems*, vol. 5, pp. 4245-4248, Tokyo, Japan, May, 2005.
15. E.O. Torres and G.A. Rincón-Mora, "Long Lasting, Self-Sustaining, and Energy-Harvesting System-in-Package (SiP) Sensor Solution," *International Conference on Energy, Environment, and Disasters (INCEED)*, Session A-2, ID 368, pp. 1-33, Charlotte, NC, Jul. 2005.
16. L.A. Milner and G.A. Rincón-Mora, "A Novel Predictive Inductor Multiplier for Integrated Circuit DC-DC Converters in Portable Applications," *International Symposium on Low Power Electronics and Design (ISLPED)*, pp. 84-89, San Diego, CA, U.S.A., Aug. 2005.
17. H.P. Forghani-zadeh and G.A. Rincón-Mora, "A Low Glitch, Continuous Low-Offset, Programmable Gain and Bandwidth, Gm-C Filter," *IEEE's 48th Midwest Symposium on Circuits and Systems (MWSCAS)*, pp. 1629-1632, Cincinnati, Ohio, Aug. 7-10, 2005.
18. H.P. Forghani-zadeh and G.A. Rincón-Mora, "A Lossless, Accurate, Self Calibrating Current-Sensing Technique for DC-DC Converters," *IEEE's Industrial Electronics Conference (IECON)*, PE-03, pp. 549-554, Raleigh, North Carolina, Nov. 6-10, 2005.
19. N. Keskar and G.A. Rincón-Mora, "A High Bandwidth, Bypass, Transient-Mode Sigma-Delta DC-DC Switching Boost Regulator with Wide LC Compliance," *IEEE's Industrial Electronics Conference (IECON)*, PE-03, pp. 543-548, Raleigh, North Carolina, Nov. 6-10, 2005.
20. E. Torres, L. Milner, N. Keskar, M. Chen, H. Pan, V. Gupta, P. Forghani, and G.A. Rincón-Mora, "SiP Integration of Intelligent, Adaptive, Self-Sustaining Power Management Solutions for Portable Applications," *IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 5311-5314, Kos, Greece, May 21-24, 2006.
21. H.I. Pan and G.A. Rincón-Mora, "Asynchronous Nonlinear Power-Tracking Supply for Power Efficient Linear RF PAs," *IEEE International Conference on Communications, Circuits, and Systems (ICCCAS)*, Guilin, China, Jun. 25-28, 2006.
22. E.O. Torres and G.A. Rincón-Mora, "Electrostatic energy harvester and Li-Ion charger for micro-scale applications," *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, San Juan, Puerto Rico, Aug. 6-9, 2006.
23. V. Gupta and G.A. Rincón-Mora, "A 5mA 0.6 μ m CMOS Miller-Compensated LDO Regulator with -27dB Worst Case Power Supply Rejection Using 60pF of On-Chip Capacitance," *IEEE International Solid-State Circuits Conference (ISSCC)*, San Francisco, CA, Feb. 2007.

CURRICULUM VITA

24. J.P. Vogt and G.A. Rincón-Mora, "SiP Wireless Micro-Power Sensors," *Government Microcircuit Applications and Critical Technology Conference*, Lake Buena Vista, FL, Mar. 21, 2007.
25. N. Keskar and G.A. Rincón-Mora, "Designing an Accurate and Robust LC-Compliant Asynchronous Sigma-Delta Boost DC-DC Converter," *IEEE International Symposium on Circuits and Systems (ISCAS)*, New Orleans, USA, May 27-30, 2007.
26. M. Chen, J.P. Vogt, and G.A. Rincón-Mora, "Design Methodology of a Hybrid Micro-Scale Fuel Cell-Thin-Film Lithium Ion Source," *IEEE International Midwest Symposium on Circuits and Systems (MWSCAS)*, Montreal, Canada, Aug. 5-8, 2007.
27. M. Chen and G.A. Rincón-Mora, "Single Inductor, Multiple Input, Multiple Output (SIMIMO) Power Mixer-Charger-Supply System," *International Symposium on Low Power Electronics and Design (ISLPED)*, Portland, Oregon, USA, Aug. 27-29, 2007.
28. W. Mustain, S. Prakash, H. Kim, P. Kohl and G. Rincón-Mora, "Micro DMFC - Lithium Ion Hybrid Power Source for Low Power Applications," *212th Meeting of the Electrochemical Society*, Washington, DC, Oct. 7-12, 2007.
29. S. Kim, G.A. Rincón-Mora, S. Kim, P. Kohl, O. Lazaro, W. Mustain, S. Prakash, D. Rivera, J. Vogt, and F. Sienkiewicz, "1cm³ Fuel-Cell, Li-Ion Powered, Wireless Sensor Instrumentation Chip," *12th ITEA Test Instrumentation Workshop*, Lancaster, CA, May 5-9, 2008.
30. L.A. Milner and G.A. Rincón-Mora, "Mixing-Sourcing Technologies to Extend the Operational Lifetime of Ultra-Portable Micro-Scale Electronics," *59th Annual Meeting of the International Society of Electrochemistry*, Seville, Spain, Sep. 2008.
31. S. Kim and G.A. Rincón-Mora, "Single-Inductor Dual-Input Dual-Output Buck-Boost Fuel Cell-Li Ion Charging DC-DC Converter," *IEEE's International Solid-State Circuits Conference (ISSCC)*, San Francisco, CA, Feb. 2009.
32. O. Lazaro, G.A. Rincón-Mora, J. Vogt, "1 – 50-MHz VHF EMI Instrumentation Sensor Circuit," *ITEA Test Instrumentation Workshop*, Ridgecrest, California, May 12-14, 2009.
33. D. Kwon and G.A. Rincón-Mora, "A Rectifier-Free Piezoelectric Energy Harvester Circuit," *IEEE International Symposium on Circuits and Systems (ISCAS)*, Taipei, Taiwan, May 24-27, 2009.
34. E. Torres and G.A. Rincón-Mora, "Energy Budget and High-Gain Strategies for Voltage-Constrained Electrostatic Harvesters," *IEEE International Symposium on Circuits and Systems (ISCAS)*, Taipei, Taiwan, May 24-27, 2009.
35. D. Kwon and G.A. Rincón-Mora, "Operation-Based Signal-Flow AC Analysis of Switching DC-DC Converters in CCM and DCM," *IEEE International Midwest Symposium on Circuits and Systems (MWSCAS)*, Cancún, Mexico, Aug. 2-5, 2009.
36. D. Kwon and G.A. Rincón-Mora, "A Single-Inductor AC-DC Piezoelectric Energy-Harvester/Battery-Charger IC Converting $\pm(0.35$ to $1.2V)$ to $(2.7$ to $4.5V)$," *IEEE's International Solid-State Circuits Conference (ISSCC)*, San Francisco, CA, Feb. 2010.
37. D. Kwon, G.A. Rincón-Mora, and E. Torres, "Harvesting Kinetic Energy with Switched-Inductor DC-DC Converters," *IEEE International Symposium on Circuits and Systems (ISCAS)*, Paris, France, May 30 - Jun. 2, 2010.

C. Other Publications

Trade Publications

1. N. Keskar and G.A. Rincón-Mora, "A user-friendly boost DC-DC converter topology - it's fast and widely stable," *Power Management Design Line (PMDL)*, Jan. 23, 2005.
2. N. Keskar and G.A. Rincón-Mora, "A user-friendly boost DC-DC converter topology - it's fast and widely stable," *Planet Analog*, Jan. 26, 2005.

CURRICULUM VITA

3. V. Gupta and G.A. Rincón-Mora, "Inside the Belly of the Beast: A Map for the Wary Bandgap Reference Designer when Confronting Process Variations," *Power Management Design Line (PMDL)*, Feb. 18, 2005.
4. G.A. Rincón-Mora and P. Forghani, "Accurate and Lossless Current-Sensing Techniques: A Practical Myth?" *Power Management Design Line (PMDL)*, Mar. 17, 2005.
5. G.A. Rincón-Mora and M. Chen, "Self-powered chips – The work of fiction," *Power Management Design Line (PMDL)*, Apr. 28, 2005.
6. G.A. Rincón-Mora and M. Chen, "Self-powered chips – The work of fiction," *Planet Analog*, Apr. 28, 2005.
7. L. Milner and G.A. Rincón-Mora, "Taming Power Inductors for System-on-Chip (SoC) Integration," *Power Management Design Line (PMDL)*, May 18, 2005.
8. N. Keskar and G.A. Rincón-Mora, "A user-friendly boost DC-DC converter topology," *Electronic Engineering Times Japan*, no. 0, 2005.
9. E. Torres and G.A. Rincón-Mora, "Energy-harvesting chips and the quest for everlasting life," *Power Management Design Line (PMDL)*, Jun. 30, 2005.
10. G.A. Rincón-Mora and H. Pan, "Quenching the thirst of RF power amps and extending the life of portable devices," *Power Management Design Line (PMDL)*, Jul. 15, 2005.
11. G.A. Rincón-Mora and H. Pan, "Quenching the thirst of RF power amps and extending the life of portable devices," *Planet Analog*, Jul. 31, 2005.
12. N. Keskar and G.A. Rincón-Mora, "A fast, accurate, LC compliant DC-DC boost regulator...Is it possible?" *Power Management Design Line (PMDL)*, Aug. 22, 2005.
13. E. Torres and G.A. Rincón-Mora, "Harvesting ambient energy will make embedded devices autonomous," *Embedded.com*, Aug. 29, 2005.
14. G.A. Rincón-Mora and V. Gupta, "Power Supply Ripple Rejection and Linear Regulators: What's all the noise about?" *Power Management Design Line (PMDL)*, Sept. 20, 2005.
15. E. Torres and G.A. Rincón-Mora, "Harvesting ambient energy," *Electronic Engineering Times*, Aug. 29, 2005.
16. G.A. Rincón-Mora and Vishal Gupta, "Power Supply Ripple Rejection and Linear Regulators: What's all the noise about?" *Planet Analog*, Sept. 20, 2005.
17. G.A. Rincón-Mora and P. Forghani, "Self-learning switching DC-DC converters meet smart power," *Power Management Design Line (PMDL)*, Oct. 13, 2005.
18. G.A. Rincón-Mora and M. Chen, "Attempting clairvoyance with battery performance," *Power Management Design Line (PMDL)*, Nov. 20, 2005.
19. G.A. Rincón-Mora and L.A. Milner, "How to fully integrate switching DC-DC supplies with inductor multipliers," *Power Management Design Line (PMDL)*, Dec. 18, 2005.
20. G.A. Rincón-Mora and L.A. Milner, "How to fully integrate switching DC-DC supplies with inductor multipliers" *Planet Analog*, Dec. 18, 2005.
21. G.A. Rincón-Mora and N. Keskar, "Cloaking the non-idealities of DC-DC converter stability," *Power Management Design Line (PMDL)*, Jan. 20, 2006.
22. G.A. Rincón-Mora and N. Keskar, "Cloaking the non-idealities of DC-DC converter stability" *Planet Analog*, Jan. 20, 2006.

CURRICULUM VITA

23. E. Torres and G.A. Rincón-Mora, "Harvesting energy into lithium-ion batteries," *Power Management Design Line (PMDL)*, Feb. 14, 2006.
24. E.O. Torres and G.A. Rincón-Mora, "Harvesting energy into lithium-ion batteries," *Planet Analog*, Feb. 14, 2006.
25. V. Gupta and G.A. Rincón-Mora, "Reduce transistor mismatch errors without costly trimming and noisy chopping schemes," *Power Management Design Line (PMDL)*, Mar. 24, 2006.
26. V. Gupta and G.A. Rincón-Mora, "Reduce transistor mismatch errors without costly trimming and noisy chopping schemes" *Planet Analog*, Mar. 24, 2006.
27. P. Forghani and G.A. Rincón-Mora, "Improve top-level simulation strategy for switching DC-DC converters," *Power Management Design Line (PMDL)*, Apr. 16, 2006.
28. P. Forghani and G.A. Rincón-Mora, "Improve top-level simulation strategy for switching DC-DC converters" *Planet Analog*, Apr. 16, 2006.
29. G.A. Rincón-Mora and M. Chen, "Li-Ion battery chargers – not just another design," *Power Management Design Line (PMDL)*, May 17, 2006.
30. G.A. Rincón-Mora and L.A. Milner, "Can SoC switching regulators answer the challenge of their SiP counterparts?" *Power Management Design Line (PMDL)*, Jun. 21, 2006.
31. G.A. Rincón-Mora and J. Vogt, "Fooling Faraday: On-chip capacitor multipliers" *Power Management Design Line (PMDL)*, Jul. 27, 2006.
32. G.A. Rincón-Mora and N. Keskar, "Unscrambling the power losses in switching boost converters" *Power Management Design Line (PMDL)*, Aug. 18, 2006.
33. G.A. Rincón-Mora and E. Torres, "Energy harvesting: A battle against power losses" *Power Management Design Line (PMDL)*, Sept. 23, 2006.
34. G.A. Rincón-Mora and E. Torres, "Energy harvesting: A battle against power losses" *Planet Analog*, Oct. 8, 2006.
35. G.A. Rincón-Mora and V. Gupta, "Bandgaps in the crosshairs: What's the trim target?" *Power Management Design Line (PMDL)*, Oct. 18, 2006.
36. G.A. Rincón-Mora and V. Gupta, "Bandgaps in the crosshairs: What's the trim target?" *Planet Analog*, Oct. 18, 2006.
37. G.A. Rincón-Mora and M. Chen, "Squeezing operational life out of a shrinking energy capsule" *Power Management Design Line (PMDL)*, Nov. 20, 2006.
38. G.A. Rincón-Mora and L. Milner, "Inductors and multipliers in practice--Get efficient transfer of energy," *Power Management Design Line (PMDL)*, Jan. 1, 2007.
39. G.A. Rincón-Mora and J. Vogt, "Self-powered wireless sensor nodes: Among other things, a load management feat," *Power Management Design Line (PMDL)*, Jan. 24, 2007.
40. G.A. Rincón-Mora and J. Vogt, "Self-powered wireless sensor nodes: Among other things, a load management feat," *Planet Analog*, Jan. 24, 2007.
41. G.A. Rincón-Mora and J. Vogt, "Self-powered wireless sensor nodes," *Electronic Components* (in Russian), no. 11, pp. 51-56, Nov. 15, 2007.
42. E.O. Torres, L.A. Milner, and G.A. Rincón-Mora, "Hybrid supplies for wireless micro-systems," *The Electrochemical Society's Interface*, vol. 17, no. 3, pp. 57-60, Fall 2008.

Internal TI Publications

CURRICULUM VITA

1. G.A. Rincón-Mora, "Voltage References – Part I," 61 pg., Jul. 1998.
2. G.A. Rincón-Mora, "Voltage References – Part II," 71 pg., Jan. 1999.
3. G.A. Rincón-Mora, "Linear Regulators," 75 pg., Nov. 1999.

Non-Engineering Publications

1. G.A. Rincón-Mora, "Strawberry Delight," poem, *Forgotten Moments* (ISBN: 1-58235-159-7), Editor's Choice Award, 2000.
2. G.A. Rincón-Mora, "Ojitos Verdes," poem, *Nuevo Impacto*, Oct. 2002.
3. G.A. Rincón-Mora, "A Christmas Tale," short story, *ISB Cafe* (www.InternationalStoryBook.com), Dec. 2002.
4. G.A. Rincón-Mora, "Mi Querida Daniela," short story, *Shades Of Romance Magazine (SORM)* (<http://www.sormag.com>), Jan./Feb. 2003.
5. G.A. Rincón-Mora, "Mi Querida Daniela," short story, ECESIS (<http://www.ece.gatech.edu/ecesis/>), Spring 2004.
6. G.A. Rincón-Mora, "Flor Andina," poem, *Nuevo Impacto*, Jul. 2004.
7. G.A. Rincón-Mora, "The Bund," photograph - *Chapter & Verse - A Publication of the Hong Kong International Literary Festival Ltd.*, 2004.
8. G.A. Rincón-Mora, "Little Lots," poem, ECESIS (<http://www.ece.gatech.edu/ecesis/>), Spring 2005.
9. G.A. Rincón-Mora, "Just passing through (Island of Idra)," photograph - *PHOTOGRAPHERS of GREECE* (http://grecja.home.pl/eng/efotograficy_grecji.htm).
10. G.A. Rincón-Mora, "Working and Teaching in Tanzania," *Volunteers for Peace (VFP) - Tanzania* (<http://www.vfpcanada.org/Tanzania.pdf>), Nov. 2005.
11. G.A. Rincón-Mora, "Let me...let me in there! (Mwanga, Tanzania)," *Volunteers for Peace - VFP 2006 Newsletter* (<http://www.vfp.org/2006NL.htm>), Jan. 2006.
12. G.A. Rincón-Mora, "Home!" photograph - ECESIS (<http://www.ece.gatech.edu/ecesis/>), Spring 2006.
13. G.A. Rincón-Mora, "Mind and Heart" poem - ECESIS (<http://www.ece.gatech.edu/ecesis/>), Spring 2007.
14. M. Cheng, G.A. Rincón-Mora, and G. Heaney, "Volunteers For Peace - Vermont non-profit serving the world," *Wishtank, Journal of Intellectual Freedom*, Jun. 2007.
15. G.A. Rincón-Mora, "The Girl in White" poem - ECESIS (<http://www.ece.gatech.edu/ecesis/>), Spring 2008.

D. Presentations

Invited Professional Short Courses Taught:

1. G.A. Rincón-Mora (only instructor: **1-day** short course, 17 participants), *Integrated DC-DC Converters: A Topological Journey!* RF Micro-Devices, Greensboro, North Carolina, Apr. 2002.
2. G.A. Rincón-Mora (only instructor: **3-day** short course, 18 participants), *Low Voltage, State-of-the-Art Integrated Power Management Circuits – A Top-Down Design Approach*. Hong Kong Science and Technology Park, Hong Kong, China, Aug. 2003.
3. G.A. Rincón-Mora (only instructor: **5-day** short course, 15 participants), *CMOS Analog Integrated Circuits*. Georgia Tech Global Learning and Conference Center, Atlanta, Georgia, Sept. 26-30, 2005.

CURRICULUM VITA

4. G.A. Rincón-Mora (only instructor: **1-hour** short course), *Dynamically Adaptive Power Supply Circuits for Radio-Frequency (RF) Power Amplifier (PA) Applications*. Invited IEEE Expert On-Line Now Module, Fall 2005.
5. G.A. Rincón-Mora (only instructor: **4-day** short course, 23 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. ON Semiconductor, Bratislava, Slovakia, Dec. 12-15, 2005.
6. G.A. Rincón-Mora (only instructor: **4-day** short course, 22 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. ON Semiconductor, Toulouse, France, Dec. 19-22, 2005.
7. G.A. Rincón-Mora (only instructor: **4-day** short course, 20 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. Navy: Space and Naval Warfare Systems Command, San Diego, California, Apr. 10-13, 2006.
8. G.A. Rincón-Mora (only instructor: **4-day** short course, 20 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. Cypress Semiconductor, Colorado Springs, Colorado, Apr. 17-20, 2006.
9. G.A. Rincón-Mora (only instructor: **1-day** short course, 70 participants), *Linear Regulators - From the Ground Up...* IEEE SSCS Distinguished Short Course in Hsinchu, Taiwan, Jun. 8, 2006.
10. G.A. Rincón-Mora (only instructor: **1-day** short course, 40 participants), *Linear Regulators - From the Ground Up...* IEEE SSCS Distinguished Short Course in Taipei, Taiwan, Jun. 9, 2006.
11. G.A. Rincón-Mora (only instructor: **4-day** short course, 15 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. Toko Inc., Semiconductor Division, Saitama, Japan, Dec. 11, 2006.
12. G.A. Rincón-Mora (only instructor: **3-day** short course, 20 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. Intel Corp., Hillsboro, Oregon, May 9-11, 2007.
13. G.A. Rincón-Mora (only instructor: **4-day** short course, 15 participants), *Power Management Integrated Circuits – A Top-Down Design Approach*. Spyro Technology, Singapore, May 21-24, 2007.
14. G.A. Rincón-Mora (only instructor: **4-day** short course, 41 participants), *Analog IC Design – An Intuitive Approach*. IDT, Atlanta, GA, Jan. 26, Feb. 23, & Mar. 9 & 23, 2009.

Invited Seminar/Tutorial Presentations with Proceedings

1. G.A. Rincón-Mora, "Self-Oscillating Hysteretic V-Mode DC-DC Controllers: From the Ground Up," *IEEE's Power Electronics Specialists Conference (PESC)*, Vancouver, Canada, Jun. 2001.
2. G.A. Rincón-Mora, "Integrated LDOs: From the Ground Up!" *IEEE's International Symposium of Circuits and Systems (ISCAS)*, Scottsdale, Arizona, May 2002.
3. G.A. Rincón-Mora, "Integrated DC-DC Converters: A Topological Journey!" *IEEE's Midwest Symposium on Circuits and Systems (MWSCAS) Conference*, Tulsa, Oklahoma, U.S.A., Aug. 2002.
4. G.A. Rincón-Mora, "Dynamically Adaptive Power Supply Circuits for PA Wireless Applications," *IEEE's International Microwave Symposium (IMS) 2005*, Long Beach, California, Jun. 2005.
5. G.A. Rincón-Mora, "Hybrid Fuel Cell / Lithium-Ion Powered, Power Conscious SiP ICs," *1st International Workshop on 3S - SOP, SIP, SOC Electronic Technologies*, Atlanta, Georgia, Sept. 2005.
6. G.A. Rincón-Mora, "AC Design and Performance of Low-Dropout Regulators (LDOs)," *IEEE's 2007 European Conference on Circuit Theory and Design (ECCTD)*, Sevilla, España, Aug. 30, 2007.
7. G.A. Rincón-Mora, "Powering Micro-Systems with Fuel-Cell Hybrids," *10th Annual International Conference on Small Fuel Cells 2008*, Atlanta, Georgia, Apr. 30, 2008.
8. G.A. Rincón-Mora, "Low-Dropout Regulator (LDO) ICs," *IEEE's 2008 Joint NEWCAS-TAISA Conference*, Montreal, Canada, Jun. 22, 2008.

CURRICULUM VITA

9. G.A. Rincón-Mora, "Switching DC-DC Supplies and their Single-Inductor, Multiple-Output (SIMO) Derivatives," *IEEE's 2010 International Symposium on Circuits and Systems (ISCAS)*, Paris, France, May 30, 2010.

Invited Seminar/Tutorial Presentations without Proceedings

1. G.A. Rincón-Mora, "Integrated Power Management Circuits." National Semiconductor, Dec. 2002.
2. G.A. Rincón-Mora, "Power Conscious ICs." Texas A & M University, Jun. 21, 2004.
3. G.A. Rincón-Mora, "El Mundo es Análogo, y las Oportunidades son Muchas." University of Puerto Rico, Oct. 18, 2004.
4. G.A. Rincón-Mora, "Hybrid Fuel Cell / Lithium-Ion Powered, Power Conscious ICs." National Semiconductor, Jun. 2005.
5. G.A. Rincón-Mora, "Microsystems: Power and Energy." Army Research Lab (ARL) Advanced Microsystems Workshop, Jan. 30, 2006.
6. G.A. Rincón-Mora, "Self-Sustaining, Self-Powered, Energy and Power Conscious ICs for Micro-Scale Devices," *Universitat Politecnica de Catalunya*, Barcelona, Spain, Jul. 10, 2006.
7. G.A. Rincón-Mora, "Self-Powered, Self-Sustaining System-on-Chip (SoC) and System-in-Package (SiP) Power Solutions," *National Science Foundation and Intelligence Community Workshop on Micro-Scale Power Sources*, Virginia, Apr. 24-25, 2007.
8. G.A. Rincón-Mora, "Powering Micro-Systems," National Semiconductor Corporation, Santa Clara, California, Nov. 30, 2007.
9. G.A. Rincón-Mora, "AC Design and Performance of Low-Dropout Regulators (LDOs)," Texas A & M University, College Station, Texas, Jun. 9, 2008.
10. G.A. Rincón-Mora, "Power Losses in Switching DC-DC Converter ICs," Texas A & M University, College Station, Texas, Jun. 9, 2008.
11. G.A. Rincón-Mora, "Powering Micro-Systems," Shanghai Jiao Tong University, China, Oct. 8, 2008.
12. G.A. Rincón-Mora, "Powering Micro-Systems," *Linear Technology Corporation*, San Jose, California, Feb. 13, 2009.
13. G.A. Rincón-Mora, "Powering Micro-Systems," *IEEE CASS Distinguished Lecture*, Montreal, Canada, Jul. 17, 2009.
14. G.A. Rincón-Mora, "Powering Microsystems," *CMOS Emerging Technologies Workshop*, Vancouver, Canada, Sept. 25-27, 2009.
15. G.A. Rincón-Mora, "Energizing and Powering Microsystems," *Vancouver's IEEE Electron Device Society Chapter*, Vancouver, Canada, Sept. 24, 2009.
16. G.A. Rincón-Mora, "Harvesting Ambient Energy in Miniaturized Systems," *SRC TxACE's Energy and Power Analog Circuit Challenges Workshop*, Dallas, Texas, Sept. 28, 2009.
17. G.A. Rincón-Mora, "Single-Inductor Multiple-Output Switching DC-DC Converters," *Inha University*, Incheon, Korea, Nov. 19, 2009.
18. G.A. Rincón-Mora, "Single-Inductor Multiple-Output Switching DC-DC Converters," *Samsung*, Seoul, Korea, Nov. 20, 2009.
19. G.A. Rincón-Mora, "Energizing and Powering Microsystems," *IT Convergence Research Project Workshop*, KAIST, Daejeon, Korea, Feb. 19, 2010.

Invited Keynote Addresses and Speeches

1. G.A. Rincón-Mora, "Orgullo Hispano," Robins Air Force Base, Sept. 23, 2003.

CURRICULUM VITA

2. G.A. Rincón-Mora, "Robins AFB Hispanic Heritage Luncheon," Robins Air Force Base, Oct. 3, 2005.
3. G.A. Rincón-Mora, "Energy and Power Management Trends," Analog Leaders Forum, Seoul, Korea, Oct. 16, 2009.
4. G.A. Rincón-Mora, "Energizing and Powering Microsystems," *IEEE's International SoC Design Conference (ISOCC)*, Busan, Korea, Nov. 23, 2009.

Invited Expert Conference Panelist

1. G.A. Rincón-Mora, Invited Expert Panelist for "Power Management for SoCs," *IEEE's 2006 VLSI Symposium*, Hawaii, Jun. 15-17, 2006.

E. Other Scholarly Accomplishments

Patents

1. G.A. Rincón *et al.*, "Amplifier Circuit and Method," U.S. Patent no. 5,491,437, issued Feb. 13, 1996.
2. G.A. Rincón *et al.*, "Controlled Current Output Stage Amplifier Circuit and Method," U.S. Patent no. 5,500,625, issued Mar. 19, 1996 (JP 8,237,046, EP 0,715,405).
3. G.A. Rincón and M. Corsi, "Cross Coupled Quad Comparator for Current Sensing Independent of Temperature," U.S. Patent no. 5,519,341, issued May 21, 1996.
4. G.A. Rincón and M. Corsi, "Current Sensing Circuit and Method," U.S. Patent no. 5,614,850, issued Mar. 25, 1997.
5. G.A. Rincón *et al.*, "A Voltage Regulator," European Patent no. 0,851,332, issued Jan. 7, 1998 (JP 10,187,258, DE 69,727,783D).
6. G.A. Rincón-Mora *et al.*, "Low Drop-Out Regulator with PMOS Pass Element," U.S. Patent no. 5,867,015, issued Feb. 2, 1999.
7. G.A. Rincón-Mora, "Voltage Loss Compensation for DC-DC Converters," European Patent no. 0,928,056, issued Jul. 7, 1999.
8. G.A. Rincón-Mora, "Low Voltage, Current-Mode, Piecewise-Linear Curvature Corrected Bandgap Reference," U.S. Patent no. 5,952,873, issued Sept. 14, 1999.
9. G.A. Rincón-Mora, "Optimized Frequency Shaping Circuit Topologies for LDOs," U.S. Patent no. 5,982,226, issued Nov. 9, 1999.
10. G.A. Rincón-Mora *et al.*, "Low-Dropout Voltage Regulator Incorporating a Current Efficient Transient Response Boost Circuit," U.S. Patent no. 6,046,577, issued Apr. 4, 2000.
11. G.A. Rincón-Mora, "Active Compensating Capacitive Multiplier," U.S. Patent no. 6,084,475, issued Jul. 4, 2000 (JP 0,151,296, EP 1,006,648).
12. G.A. Rincón-Mora, "An Exact Curvature-Correcting Method for Bandgap Circuits," U.S. Patent no. 6,157,245, issued Dec. 5, 2000 (EP 1,041,480).
13. G.A. Rincón-Mora and M. Corsi, "Current-efficient low-drop-out voltage regulator with improved load regulation and frequency response," U.S. Patent no. 6,188,211, issued Feb. 13, 2001 (EP 957,421).
14. G.A. Rincón-Mora, "Accurate, Fast, and User Programmable Hysteretic Comparator," U.S. Patent no. 6,229,350, issued May 8, 2001.
15. G.A. Rincón-Mora and M. Huggins, "High Power Supply Ripple Rejection Internally Compensated Low Drop-Out Voltage Regulator Using PMOS Pass Device," U.S. Patent no. 6,304,131, issued Oct. 16, 2001.

CURRICULUM VITA

16. G.A. Rincón-Mora, "Integrated Low Ripple, High Frequency Hysteretic Controller for dc-dc Converters," U.S. Patent no. 6,369,555, issued Apr. 9, 2002.
17. G.A. Rincón-Mora and B. Abesingha, "Method of Minimizing Package -Shift Effects in Integrated Circuits by Using a Thick Metallic Overcoat," U.S. Patent no. 6,432,753, issued Aug. 13, 2002.
18. G.A. Rincón-Mora and R. Stair, "Buffer/Driver for Low Dropout Regulators," U.S. Patent no. 6,501,305, issued Dec. 31, 2002.
19. G.A. Rincón-Mora, "Adjustable Temperature-Compensated Threshold Circuit with Trip-Points Exceeding the Given Supplies," U.S. Patent no. 6,545,511, issued Apr. 8, 2003 (JP 2002368587).
20. G.A. Rincón-Mora and M. Pulkin, "Stable Low Dropout, Low Impedance Driver for Linear Regulators," U.S. Patent no. 6,573,694, issued Jun. 3, 2003.
21. G.A. Rincón-Mora, "Temperature-Compensated Threshold Circuit," European Patent no. 1,351,063, issued Aug. 10, 2003.
22. G.A. Rincón-Mora, "Integrated low ripple, high frequency power efficient hysteretic controller for dc-dc converters," U.S. Patent no. 6,628,109, issued Sept. 30, 2003.
23. G.A. Rincón-Mora *et al.*, "Semiconductor device which minimizes package-shift effects in integrated circuits by using a thick metallic overcoat," U.S. Patent no. 6,750,553, issued Jun. 15, 2004.
24. G.A. Rincón-Mora and R. Stair, "Circuit and method to facilitate threshold voltage extraction and facilitate operation of a capacitor multiplier," U.S. Patent no. 6,806,762, issued Oct. 19, 2004.
25. G.A. Rincón-Mora, V. Gupta, and P. Raha, "Low Dropout Monolithic Linear Regulator Having Wide Operating Load Range," U.S. Patent no. 6,847,260, issued Jan. 25, 2005.
26. G.A. Rincón-Mora and M. Arnold, "Voltage Regulator with Low Dropout Voltage (Mode-Hopping Buffer with Rail-to-Rail Output for Low Dropout)," U.S. Patent no. 7,339,416, issued Mar. 4, 2008.
27. G.A. Rincón-Mora and M. Arnold, "Gate driver circuit for power transistor." U.S. Patent no. 7,560,973, issued Jul. 14, 2009.

Commercial Product Releases

1. G.A. Rincón-Mora (Project Leader), TPS2810 - CMOS driver, Released-to-production (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.

CURRICULUM VITA

11. G.A. Rincón-Mora (Design Team Leader), TPS5210 - Programmable BiCMOS PWM Controller, RTP 1998 - featured on *EDN's Top 100 Products* and on the cover of *Electronic Design*.
12. G.A. Rincón-Mora (Design Team Leader), TPS5615 - BiCMOS PWM Controller, RTP 1998.
13. G.A. Rincón-Mora (Design Team Leader), TPS5618 - BiCMOS PWM Controller, RTP 1998.
14. G.A. Rincón-Mora (Design Team Leader), TPS5625 - BiCMOS PWM Controller, RTP 1998.
15. G.A. Rincón-Mora (Design Team Leader), TPS5633 - BiCMOS PWM Controller, RTP 1998.
16. G.A. Rincón-Mora (Design Team Leader), SN104685DW - BiCMOS PWM Controller, RTP 1998.
17. G.A. Rincón-Mora (Design Team Leader), TPS7415D - CMOS Liner Reg., RTP 1999.
18. G.A. Rincón-Mora (Design Team Leader), TPS7418D - CMOS Liner Reg., RTP 1999.
19. G.A. Rincón-Mora (Design Team Leader), TPS7425D - CMOS Liner Reg., RTP 1999.
20. G.A. Rincón-Mora (Design Team Leader), TPS7430D - CMOS Liner Reg., RTP 1999.
21. G.A. Rincón-Mora (Design Team Leader), TPS7433D - CMOS Liner Reg., RTP 1999.
22. G.A. Rincón-Mora (Design Team Leader), TPS56100 - 5V BiCMOS PWM Controller, RTP 1999.
23. G.A. Rincón-Mora (Circuit Designer/Tech. Advisor), TPS56300 - BiCMOS Chrg Pump, RTP 1999.
24. G.A. Rincón-Mora (Design Team Leader), TPS5211 - BiCMOS 1MHz Hyst. Controller, RTP 1999.
25. G.A. Rincón-Mora (Design Team Leader), TPS5300 - BiCMOS Laptop PWM Controller, RTP 2001.
26. G.A. Rincón-Mora (Circuit Designer), MSP430 - BiCMOS Low Dropout Regulator, RTP 2004.

V. Service

A. Professional Contributions

Leadership

1. Chapter Vice Chair, Atlanta *IEEE Solid-State Circuits and Circuits and Systems Society (SSCS-CASS) Chapter*, 2003-2004
2. Chapter Chair, Atlanta *IEEE Solid-State Circuits and Circuits and Systems Society (SSCS-CASS) Chapter*, 2004-Present
3. Technical Program Co-Chair, *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, Puerto Rico, 2006
4. Technical Program Chair, *Joint IEEE 50th Midwest Symposium on Circuits and Systems (MWSCAS) and 5th IEEE NEWCAS*, Montreal, 2007
5. Circuit Design Vice Chair, *IEEE International Caribbean Conference on Devices, Circuits and Systems (ICDCS)*, Cancun, Mexico, 2008
6. Guest Co-Editor, *Analog Integrated Circuits and Signal Processing (AICSP) Journal*, Special Issue on Analog and RF), Aug. 2009
7. Associate Editor, *IEEE Transactions on Circuits and Systems II (TCAS II)*, 2007-2009 and 2010-2011.
8. Editorial Board Member, *Journal of Low-Power Electronics (JOLPE)*, 2009-Present

CURRICULUM VITA

9. General Chair, *Energy and Power Integrated Circuits Workshop*, SRC Texas Analog Center of Excellence (TxACE), Sept. 28-29, 2009.

Membership

1. Technical Program Committee, *IEEE Southwest Symposium on Mixed-Signal Design*, 2002
2. Selection Committee Review Panel, *National Science Foundation's (NSF) SBIR/STTR Committee on Power Management*, Mar. 2003
3. Selection Committee Review Panel, *National Science Foundation's (NSF) SBIR/STTR Committee on Power Management*, Sept. 2003
4. Technical Committee, *IEEE's Circuits and Systems' Analog Signal Processing Technical Committee*, 2003-Present
5. Review Committee, *IEEE International Symposium on Circuits and Systems*, 2004-2005
6. Selection Committee Review Panel, *National Science Foundation's (NSF) SBIR/STTR Committee on Signal Processing & IC Design*, Oct. 2004
7. Selection Committee Review Panel, *National Science Foundation's (NSF) SBIR/STTR Committee on IC Design: Testing*, Aug. 2005
8. Steering Committee, *IEEE Midwest Symposium on Circuits and Systems*, 2006-Present
9. Selection Committee Review Panel, *National Science Foundation's (NSF) SBIR/STTR Committee on IC Design I*, Feb. 2007
10. Technical Committee, *IEEE's Circuits and Systems' Power Systems and Power Electronic Circuits Technical Committee*, 2009-Present

Professional Membership

1. Fellow IEE/IET (2006-Present), Senior Member IEEE (2001-Present), Member IEEE (1990-2001), and Life Member of the Society of Hispanic Professional Engineers (2000-Present).

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.

B. Campus Contributions

1. PI and Administrator of the *Georgia Tech Analog Consortium* (Funds 5-6 Ph.D. graduate students per year for various analog faculty members), Dec. 2001-Dec. 2003
2. PI and Administrator of the *TI Analog Fellowship Program* (Funds Ph.D. graduate students), 2001-Present
3. PI and Administrator of the *Analog Undergraduate Outreach Program* (Funds diverse undergraduate students), 2005-Present
4. ECE Graduate Student Recruitment Committee, Member, 2001-2003 and 2004-2005
5. ECE Student-Faculty Committee, Member: 2003-2004, 2005-2006, 2006-2007, and 2007-2008; Chair: 2008-2009; Chair: 2009-2010.
6. ECE Student Award Committee, Member: 2006
7. ECE Search Committee for Georgia Power Distinguished Professor, Member, 2006

CURRICULUM VITA

8. Freshmen Partner for Freshmen Partnership Program, 2006

9. Outstanding Electrical and Computer Engineering Senior Student Award Selection Committee, 2009

10. Ph.D. Committee Participation:

	Student	Proposal Committee	Reading Committee	Defense Committee	Ph.D.
1	Sidharth Dalmia	Chair: 3/14/02			Ph.D.
2	Zhiwei Dong	N/A	Member: 7/15/02	Member: 7/15/02	Ph.D.
3	Theocharis Boukas	Chair: 8/12/02	N/A	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: Fall 11/4/04	Chair: Fall 11/4/04	Ph.D.
8	Bhyrav Mutnury	Member: 1/28/05			Ph.D.
9	Pooya Forghani	Member: 6/24/04	Chair: 6/1/06	Chair: Sum. 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:			Ph.D.
18	Rajeswari Chandrasekaran	Member: 08/22/07			Ph.D.
19	David Pritchett	Member: 12/13/07		Member: 2/4/09	Ph.D.
20	N. Lalgudi Subramanian	Member		Member: 3/26/08	Ph.D.
21	Erick Torres	Member: 4/9/08			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	Member: 7/15/09			Ph.D.

C. Community Volunteer Service

1. Two-week assignment for Volunteers for Peace (VFP) in Kigonigoni, Tanzania, to help build a school and a levy in the summer of 2006.

CURRICULUM VITA

2. Two-week assignment for Volunteers for Peace (VFP) in Bangalore, India, to work with children with AIDS and disabled persons in the summer of 2008.
3. Two-week assignment for Service Civil International (SCI) in Ulaan Baatar, Mongolia, to work with kids at an orphanage to help with construction and farming in the summer of 2009.

VI. Honors, Awards, and Visibility

Awards

1. TI's "Three Year Patent Award" for U.S. Patents 5,491,437; 5,500,625; and 5,519,341 in 1999.
2. Florida International University's "Charles E. Perry Visionary Award in 2000.
3. Inducted into Georgia Tech's "Council of Outstanding Young Engineering Alumni" in 2000.
4. Society of Hispanic Professional Engineers' (SHPE) "Hispanic in Technology Award" in 2000.
5. "State of California Commendation Certificate" from Lieutenant Governor Cruz M. Bustamante in 2001.
6. Robins Air Force Base's "Orgullo Hispano Award" in Sept. 23, 2003.
7. Robins Air Force Base's "Hispanic Heritage Award" in Oct. 3, 2005.
8. "IEEE CASS Service Award" for contributions as Technical Program Chair for the Joint IEEE Midwest Symposium on Circuits and Systems MWSCAS and NEWCAS 2007 Conferences in Aug. 8, 2007.

Recognitions

1. Dr. Rincón-Mora's design (TPS5210 – Droop-Compensated Buck Hysteretic Controller) was featured on the cover of *Electronic Design* and picked as one of the "Top 100 Products" of 1998 by *EDN*.
2. 1999 TIDN Forum's "Significant TI Contributor."
3. Adjunct Professor for the Georgia Institute of Technology in 1999-2001.
4. Voted by *Hispanic Business* into its list of "The 100 Most Influential Hispanics" in 2000.
5. Elevated to "Senior Member" of the Institute of Electrical and Electronics Engineers (IEEE) in 2001.
6. Included in Marquis' 56th-60th Editions of *Who's Who in America* in 2002-2006.
7. Included in 6th-9th Editions of *Who's Who in Science and Engineering* in 2003-2007.
8. Named "HENAAC Role Model of the Week" by Hispanic Engineer National Achievement Awards Corporation in Jul. 5, 2005.
9. One of IEEE's top 200 most downloaded journal papers in 2004 (177 times in one month): B. Sahu and G.A. Rincón-Mora, "A High-Efficiency Linear RF Power Amplifier With a Power-Tracking Dynamically Adaptive Buck-Boost Supply," *IEEE Transactions on Microwave Theory and Techniques*, vol. 52, no. 1, pp. 112-120, Jan. 2004.
10. "7th Most Read Power Management Design Line How-To Article in 2005" for G.A. Rincón-Mora and V. Gupta, "Power Supply Ripple Rejection and Linear Regulators: What's all the noise about?" *Power Management Design Line*, Sept. 20, 2005.
11. "2nd Most Read Power Management Design Line How-To Article in 2006" for E. Torres and G.A. Rincón-Mora, "Harvesting energy into lithium-ion batteries," *Power Management Design Line (PMDL)*, Feb. 14, 2006.
12. Included in 1st Edition of *Who's Who of Emerging Leaders* in 2007.

CURRICULUM VITA

13. Elected *Distinguished Lecturer* by IEEE's CASS for 2009-2010.
14. Elevated to *Fellow* of the *Institution of Engineering and Technology* (IET) in 2009.
15. 2nd Place in *2009 SAIC Georgia Tech Paper Competition* for D. Kwon and G.A. Rincón-Mora, "A Rectifier-Free Piezoelectric Energy Harvester Circuit."

Visibility: Magazine Covers featuring Dr. Rincón-Mora

1. "Bravo – National Award Winners," *SHPE – Official Magazine of the Society of Hispanic Professional Engineers*, Spring 2000.
2. "The 100 Most Influential Hispanics," *Hispanic Business Magazine*, Oct. 2000.
3. "A high-tech engineer with a low-tech lifestyle," *La Fuente* (Dallas publication), Mar. 2000.
4. "Gabriel Rincón-Mora - Impacta en la alta tecnología," *Nuevo Impacto* (Atlanta publication), Aug. 2002.
5. "Profesionales Latinos – La nueva cara de Georgia," *Nuevo Impacto* (Atlanta publication), Oct. 2003.
6. "Gabriel Rincón Mora – Un ingeniero polifacético: Inventor, profesor, escritor y actor" - "Gabriel Rincón Mora – Outstanding Engineer and Writer," *Nuevo Impacto* (Atlanta publication), Nov. 2004.

Visibility: Feature Stories about Dr. Rincón-Mora

1. "Passion for design, apathy for gizmos," *Electronic Engineering Times*, Jun. 2000.
2. "Designer has passion for work, apathy for gizmos," *Planet Analog*, Jun. 2000.
3. "By Day an Engineer," *Intown* (Atlanta publication), Aug. 2002.
4. "Notar – Short Stories and Poems to Boot," *SHPE – Official Magazine of the Society of Hispanic Professional Engineers*, Aug. 2002.
5. "Innovators Matter," *Hispanic Business Magazine*, Sept. 2002.
6. "Innovators Matter," *Hispanic Business Magazine*, Dec. 2002.
7. "Hispanic Engineering Talent," *Georgia Tech Society of Professional Hispanic Engineers*, Feb. 2003.
8. "World-class training workshop on analog IC power management by top Integrated Circuit (IC) expert from the United States," *Hong Kong Science and Technology Parks, News & Newsletter*, Oct. 2003.
9. "SSCS Subsidizes Short Course on Linear Regulator Design in Taipei," *IEEE Solid-State Circuits Society Newsletter*, Sept. 2006.

Other Misc. Awards & Recognitions

1. *Presidential Academic Fitness Award*, (signed by President George Bush, Sr.), 1989.
2. *Insignis Scholarship*, University of Detroit, 1989.
3. *Phi Kappa Phi* (national honor society), 1991.
4. *Dean's List*, Florida International University, 1989-1992.
5. *B.S.E.E. with High Honors*, Florida International University, 1992.
6. *Florida Undergraduate Scholars Fund Scholarship*, State of Florida, 1989-1992.

CURRICULUM VITA

7. *Faculty Scholars Scholarship*, Florida International University, 1989-1992.
8. *Honorary Award Recognition*, National Dean's List, 1990-1992.
9. *Eta Kappa Nu* (national electrical engineering honor society), 1992.
10. *Honorable Mention*, National Science Foundation, 1993.
11. *Tau Beta Pi* (Life Member: national engineering honor society), 1994.
12. *Outstanding Ph.D. Graduate*, Georgia Tech, 1996.