2018 PECAS TC Activity Report

1. **Conferences or workshops:**

1.	Prof. Giulia Di Capua	[1] General Chair of the 14th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2017), held from the 12th to the 15th of June 2017 in Giardini Naxos - Taormina, Italy. (Technical Sponsors IEEE CAS society and IEEE CEDA). [2] Technical Program Chair of the 15th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2017),held from the 2nd to the 5th of July 2018 in Prague, Czech Republic. (Technical Sponsors IEEE CAS society and IEEE CEDA).
2.	Prof. Gabriel A. Rincon-Mora	[1] "Light-Harvesting Photovoltaic Charger–Supplies," IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Windsor, Canada, Apr. 30-May 3, 2017. [2] "Tiny Inductively Powered Battery Chargers," IEEE International Symposium on Industrial Electronics (ISIE), Edinburgh, Scotland, Jun. 19-21, 2017. [3] "Tiny Light-Harvesting Photovoltaic Charger-Supplies," IEEE/ACM International Symposium on Low Power Electronics and Design (ISLPED), Taipei, Taiwan, Jul. 24-26, 2017. [4] "Energizing and Powering Intelligent Microsensors," IEEE/IEIE International Conference On Consumer Electronics (ICCE-Asia), Jeju Island, Korea, Jun. 24-26, 2018. [5] "Tiny Inductively Powered Battery Chargers," IEEE Midwest Symposium on Circuits and Systems (MWSCAS), Windsor, Canada, Aug. 5-8, 2018. [6] "Energy-Harvesting IoT Microsensors," CMOS Emerging Technologies, Warsaw, Poland, Mar. 28-30, 2017. [7] "On The Elusive Art of Managing Time and Research Projects," Tainan IEEE Solid-State Circuits and Circuits and System Society Chapters (SSCS and CASS), Tainan, Taiwan, Nov. 15, 2017.
3.	Prof. Tyrone Fernando	[1] 2017 International Conference on Sustainable Energy Engineering (ICSEE) June 12-14, 2017, Perth, Australia.

2. **Participation in the Distinguished Lecturers Program:**

1.	Prof. Gabriel A. Rincon-Mora	[1] "Energizing and Powering Microsystems," Distinguished Lecture (DL) IEEE Circuits and System Society Chapter (CASS) in Mayagüez, Puerto Rico, March 22, 2018. [2] "Energizing and Powering Microsystems," Distinguished Lecture (DL) IEEE Circuits and System Society Chapter (CASS) in Montevideo, Uruguay, April 30, 2018. [3] "Energizing and Powering Microsystems," Distinguished Lecture (DL) IEEE Circuits and System Society Chapter (CASS) in Curitiba, Brazil, May 2, 2018. [4] "Energizing and Powering Microsystems," Distinguished Lecture (DL) IEEE Circuits and System Society Chapter (CASS) in Santiago, Chile,

		May 10, 2018.
		[5] "Energizing and Powering Microsystems," Distinguished Lecture (DL) IEEE Circuits and System Society Chapter (CASS) in Valparaíso, Chile, May 11, 2018.

3. Editorial Service:

1	Prof. Giulia Di Capua	[1] Guest Editor for a Special Issue of the Journal "Integration, the VLSI Journal", publication expected: July 2018.
2	Prof. Junrui Liang	[1] IET Circuits, Devices & Systems, Associate Editor, 2018/03/08-2021/03/08.
		[2] SPIE Smart Structures + Nondestructive Evaluation, Active and Passive Smart Structures and Integrated Systems XIII, Program Committee, March 2018, Denver, USA. IEEE International Symposium on Circuits and Systems (ISCAS), Special Session (topic: power solutions for distributed IoT devices) Organizer, May 2018, Florence, Italy.
		[3] IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), Special Session (topic: Energy Harvesting for Self-Powered Health Monitoring) Organizer, July 2018, Auckland, New Zealand.
3.	Prof. Ke-Horng Chen	[1] Analog Integrated Circuits and Signal Processing, Editorial Board Member, since 2013.
		[2] IEEE Transactions on Circuits and Systems I: Regular Papers, Associate Editor, since 2014.
		[3] IEEE Transactions on Power Electronics, Associate Editor, since 2009.
		[4] Technical Program Co-Chair, International Future Energy Electronics Conference 2017 - ECCE Asia (IFEEC2017-ECCE Asia), June 3-7, 2017, Kaohsiung, Taiwan.
		[5] Technical Program Committee Member (Track 15 - Power management), 43rd European Solid-State Circuits Conference (ESSCIRC2017), September 11-14, 2017, Leuven, Belgium.
		[6] Technical Program Committee Member (Power Management Track), 2018 International Symposium on Circuits and Systems (ISCAS2018), May 27-30, 2018, Florence, Italy.
		[7] Technical Program Committee Member (Track 15 - Power management), 44th European Solid-State Circuits Conference (ESSCIRC2018), September 3-6, 2018, Dresden, Germany.
		[8] General Co-Chair, 2018 Integrated Power Conversion and Power Management (PwrSoC2018), October 17-19, 2018, Hsinchu Taiwan.
4.	Prof. Guido Torelli	[1] Circuits, Systems, and Signal Processing (Springer)
		[2] Electronics Letters (IET)
		[3] IEEE Transactions on Circuits and Systems I (IEEE)
		[4] Journal of Low-Power Electronics (JOLPE) (American Scientific Publishers)

		[5] Microelectronics Journal (Elsevier)
		[6] VLSI Design (Hindawi)
		[7] Member of Technical Committee: 2017 13th Conference on Ph.D. Research in Microelectronics and Electronics (PRIME), 12-15 June 2017, Giardini Naxos - Taormina (Italy).
		[8] Member of Technical Committee: 9th IEEE Latin American Symposium on Circuits and Systems (LASCAS), Puerto Vallarta (Mexico), 25-28 February 2018.
		[9] Member of Technical Committee: 2017 13th Conference on Ph.D. Research in Microelectronics and Electronics (PRIME), to be held on 02-05 July 2018, Prague (Czech Republic).
5.	Prof. Abdelali El Aroudi	[1] Associate Editor of Modelling and Simulation in Engineering, 2012-to-date
		[2] Associate Editor of IET Power Electronics, 2014-to-date
		[3] Associate Editor of IET Electronics Letters, 2015-to-date
		[4] Guest Associate Editor of IEICE Transactions NOLTA 2018
		[5] Guest Associate Editor of Energies, 2018
		[6] Guest Associate Editor of IEEE Transactions on Circuits and Systems II, 2018
		[7] Associate Editor of IET Circuits, Devices & Systems, 2018
		[8] Technical Program Committee Member, 2017 International Renewable and Sustainable Energy Conference, Dec 4-7, Tangier, Morocco.
		[9] Technical Program Committee Member, 2018 International Conference on Structural Nonlinear Dynamics and Diagnosis (CSNDD'2018), 23-25 May 2018, Tangier, Morocco.
		[10] Technical Program Committee Member (Power and Energy Track), 2018 International Symposium on Circuits and Systems (ISCAS2018), May 27-30, 2018, Florence, Italy.
		[11] General Co-Chair, 2018 International Symposium on Nonlinear Theory and Its Applications (NOLTA2018), Sep. 2, Tarragona, Spain.
6.	Prof. Tsorng-Juu Peter Liang	[1] Chair, IEEE Tainan Section 2016-2017
		[2] General Chair of IEEE International Future Energy Electronics Conference 2017
7.	Prof. Tyrone Fernando	[1] Associate editor of IEEE Transactions on Circuits and Systems II.
		[2] Associate editor of IEEE ACCESS.
		[3] General chair of ICSEE 2017, Perth, Australia.
		[4] General chair of 2018 Asia Conference on Energy and Environment Engineering, Jan 2018, Shanghai, China.

8	Prof Herbert Iu	[1] Complex Networks for Modern Smart Grid Applications (Part 1 and Part 2) Guest Editors: Herbert H.C. Iu, Chia-Chi Chu, Chika Nwankpa, Chai Wah Wu IEEE JETCAS Issue: June and September 2017

4. Publications (Journal Articles, Conference Papers, Books, Book Chapters):

1.	Prof. Giulia Di Capua	Journal Articles
		[1] E. Ozalevli, N. Femia, G. Di Capua, R. Subramonian, D. Du, J. Sankman, M. El Markhi, A Cost-Effective Adaptive Rectifier for Low Power Loosely Coupled Wireless Power Transfer Systems, IEEE Transactions on Circuits and Systems I: Regular Papers, accepted on Dec. 2017, in press.
		[2] G. Di Capua, N. Femia, K. Stoyka, Switching Power Supplies with Ferrite Inductors in Sustainable Saturation Operation, International Journal of Electrical Power and Energy Systems, vol. 93, pp. 494-505, December 2017.
		[3] G. Di Capua, N. Femia, M. Migliaro, O. Sacco, D. Sannino, K. Stoyka, V. Vaiano, Intensification of a flat-plate photocatalytic reactor performances by innovative visible light modulation techniques: A proof of concept, Chemical Engineering and Processing: Process Intensification, vol. 118, pp. 117-123, August 2017.
		[4] V. Vaiano, O. Sacco, D. Sannino, G. Di Capua, N. Femia, Enhanced performances of a photocatalytic reactor for wastewater treatment using controlled modulation of LEDs light, Chemical Engineering Transactions, vol. 57, pp. 553-558, 2017.
		[5] G. Di Capua, N. Femia, K. Stoyka, A generalized numerical method for ferrite inductors analysis in high current ripple operation, Integration, the VLSI Journal, vol. 58, pp. 473-484, June 2017.
		Conference papers
		[1] N. Femia, G. Di Capua, Impact of receiver conversion configuration on the efficiency of Wireless Power Transfer Systems, International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2017), Giardini Naxos-Taormina, Italy, 12-15 June 2017.
		[2] K. Stoyka, N. Femia, G. Di Capua, Optimizing power converters with partially saturated inductors by evolutionary algorithms, International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2017), Giardini Naxos-Taormina, Italy, 12-15 June 2017.
		[3] N. Femia, G. Di Capua, R. A. P. Ohashi, Harmonic analysis of diode-bridge rectifiers in Wireless Power Transfer System, International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2017), Giardini Naxos-Taormina, Italy, 12-15 June 2017.
		[4] G. Di Capua, N. Femia, K. Stoyka, M. Lodi, A. Oliveri, M. Storace, Ferrite inductor models for switch-mode power supplies analysis and design, International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2017), Giardini Naxos-Taormina, Italy, 12-15 June 2017.

2.	Prof. Junrui Liang	**Journal Articles** [1] Junrui Liang*, Yuheng Zhao, and Kang Zhao, "Synchronized triple bias-flip interface circuit for piezoelectric energy harvesting enhancement," IEEE Transactions on Power Electronics, DOI: 10.1109/TPEL.2018.2815922. [2] Liya Zhao, Lihua Tang, Junrui Liang, and Yaowen Yang, "Synergy of wind energy harvesting and synchronized switch harvesting interface circuit," IEEE/ASME Transactions on Mechatronics, vol. 22, no. 2, pp. 1093-1103, 2017. [3] Junrui Liang*, "Synchronized bias-flip interface circuits for piezoelectric energy harvesting enhancement: a general model and prospects,"Journal of Intelligent Material Systems and Structures, vol. 28, no. 3, pp. 339–356, 2017. **Conference Papers** [1] Junlong Wang and Junrui Liang*, "Energy harvesting from horizontal and vertical backpack movements during walking," Proceedings of the 2018 IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Auckland, New Zealand, 2018. (AIM 2018) [2] Guobiao Hu, Bao Zhao, Lihua Tang*, Junrui Liang, and Raj Das, "Optimization of cantilevered piezoelectric energy harvester with standard DC interface circuit," ISMA International Conference on Noise and Vibration Engineering, Leuven, Belgium, 2018. (ISMA 2018) [3] Bao Zhao, Junrui Liang*, and Kang Zhao, "Phase-variable parallel synchronized triple bias flips (PV-P-S3BF) interface circuit towards broadband piezoelectric energy harvesting," Proceedings of the 2018 IEEE International Symposium on Circuits and Systems, Florence, Italy, 2018. (ISCAS 2018) [4] Junrui Liang*, "An improvement on extended impedance method towards efficient design and analysis of high-frequency class-E resonant inverters," IPEC-Niigata 2018 - ECCE Asia, May 20-24 2018, Niigata, Japan. (ECCE Asia 2018) [5] Bao Zhao and Junrui Liang*, "On the circuit solutions towards broadband and high-capability piezoelectric energy harvesting systems," Proceedings of SPIE Conference 10595, Active and Passive Smart Structures and Integrated Systems, March 4-8, 2018, Denver, USA. (SPIE SS/NDE 2018) [6] Kang Zhao, Junrui Liang*, and Chen Chen, "Parallel synchronized septuple bias-flip circuit for piezoelectric energy harvesting enhancement," The 43th Annual Conference of the IEEE Industrial Electronics Society, October 29 - November 1, 2017, Beijing, China. (IECON 2017) [7] Junrui Liang* and Shuai Zhang, "An efficient steady-state simulation of class-e resonant inverter considering MOSFET parasitic components by using extended impedance method," International Future Energy Electronics Conference 2017 – ECCE Asia, Kaohsiung, Taiwan, 2017. (ECCE Asia 2017) [8] Kang Zhao, Yuheng Zhao, and Junrui Liang*, "Live Demonstration of A vibration-powered Bluetooth wireless sensor node with running PFC power conditioning," Proceedings of the 2017 IEEE International Symposium on Circuits and Systems, Baltimore, USA, 2017. (ISCAS 2017) [9] Kang Zhao, Yuheng Zhao, and Junrui Liang*, "A vibration-powered Bluetooth wireless sensor node with running PFC power conditioning," Proceedings of the 2017 IEEE International Symposium on Circuits and Systems, Baltimore, USA, 2017. (ISCAS 2017)
3.	Prof. Ke-Horng Chen	**Journal Articles** [1] Wen-Hau Yang, Hsiang-An Yang, Chao-Jen Huang, Ke-Horng Chen, Ying-Hsi Lin, "A High-Efficiency Single-Inductor Multiple-Output Buck-Type LED Driver With Average Current Correction Technique," IEEE Transactions on Power Electronics (Volume 33, Issue 4, April 2018).

		Conference Papers
		[1] Wei-Ting Lin, Zong-Yi Lin, Chia-Hao Liu, Ke-Horng Chen, Ying-Hsi Lin, Jian-Ru Lin, and Tsung-Yen Tsai, "A 20MHz Low Dropout Controlled Current Sensor for Constant on-Time Based Envelope Tracking Supply Modulator for Radio Frequency Power Amplifier," 2018 IEEE International Symposium on Circuits and Systems (ISCAS).
		[2] Che-Hao Yeh, Yen-Ting Lin, Chun-Chieh Kuo, Chao-Jen Huang, Cheng-Yu Xie, Shen-Fu Lu, Wen-Hau Yang, Ke-Horng Chen, Kuo-Chi Liu, Ying-Hsi Lin, "A 70W and 90% GaN-based class-E wireless-power-transfer system with automatic-matching-point-search control for zero-voltage switching and zero-voltage-derivative switching," 2018 IEEE International Solid-State Circuits Conference (ISSCC).
		[3] Jian-He Lin, Yu-Sheng Ma, Chia-Ming Huang, Li-Chi Lin, Chiao-Hung Cheng, Ke-Horng Chen, Ying-Hsi Lin, Shian-Ru Lin, Tsung-Yen Tsai, "A high-efficiency and fast-transient digital-low-dropout regulator with the burst mode corresponding to the power-saving modes of DC-DC switching converters," 2018 IEEE International Solid-State Circuits Conference (ISSCC).
		[4] Wen-Hau Yang, Li-Cheng Chu, Shang-Hsien Yang, Yan-Jiun Lai, Shao-Qi Chen, Ke-Horng Chen, Ying-Hsi Lin, Shian-Ru Lin, Tsung-Yen Tsai, "An enhanced-security buck DC-DC converter with true-random-number-based pseudo hysteresis controller for internet-of-everything (IoE) Devices," 2018 IEEE International Solid-State Circuits Conference (ISSCC).
		[5] Shao-Qi Chen, Yen-Ting Lin, Yu-Sheng Ma, Wen-Hau Yang, Ke-Horng Chen, Ying-Hsi Lin, Jian-Ru Lin, Tsung-Yen Tsai, "A high efficiency and fast transient digital low-dropout assisted switched-capacitor converter for EMI-free Internet of Everything (IoE) systems," 2017 IEEE Asian Solid-State Circuits Conference (A-SSCC).
		[6] Chiao-Hung Cheng, Li-Chi Lin, Jian-He Lin, Ke-Horng Chen, Ying-Hsi Lin, Jian-Ru Lin, Tsung-Yen Tsai, "A DVS-based burst mode with automatic entrance point control technique in DC-DC boost converter for wearable devices and IoT applications," 2017 IEEE Asian Solid-State Circuits Conference (A-SSCC).
		[7] Yen-Ting Lin, Wen-Hau Yang, Yu-Sheng Ma, Yan-Jiun Lai, Hung-Wei Chen, Ke-Horng Chen, Chin-Long Wey, Ying-Hsi Lin, Jian-Ru Lin, Tsung-Yen Tsai, "Unsymmetrical parallel switched-capacitor (UP-SC) regulator with fast searching optimum ratio technique," 43rd IEEE European Solid State Circuits Conference (ESSCIRC).
		[8] Yu-Sheng Ma, Wen-Hau Yang, Yen-Ting Lin, Hsin Chen, Li-Chi Lin, Ke-Horng Chen, Chin-Long Wey, Ying-Hsi Lin, Jian-Ru Lin, Tsung-Yen Tsai, Jui-Lung Chen, "A low quiescent current and cross regulation single-inductor dual-output converter with stacking MOSFET driving technique," 43rd IEEE European Solid State Circuits Conference (ESSCIRC).
		[9] Li-Chi Lin, Kuan-Yu Chen, Wen-Hau Yang, Ru-Yu Huang, Ke-Horng Chen, Ying-Hsi Lin, Shian-Ru Lin, Tsung-Yen Tsai, "A digital reverse current self-calibration technique in 90% high efficiency rectified power supply for near field communication through magnetic field induction," 2017 IEEE International Symposium on Circuits and Systems (ISCAS).
4.	Prof. Guido Torelli	Conference Papers
		[1] Y. A. Belay, A. Cabrini, and G. Torelli, Analysis of array biasing in crosspoint memories for leakage power minimization, Proceedings 2017 13rd Conference on Ph.D. Research in Microelectronics and Electronics (PRIME), Giardini Naxos (Italy), 12-15 June 2017, pp. 17-20. DOI 10.1109/PRIME.2017.7974096
		[2] D. Palomeque-Mangut, J. L. Ausín, F. Duque-Carrillo, and G. Torelli, Design of robust pseudo-resistors with optimized frequency response, Proceedings 2017 European Conference on Circuit Theory and Design (ECCTD '17), Catania (Italy), 4-6 September 2017, pp. 1-4. DOI

		10.1109/ECCTD.2017.8093269
		[3] M. Pasotti, M. Carissimi, C. Auricchio, D. Brambilla, E. Calvetti, L. Capecchi, L. Croce, D. Gallinari, C. Mazzaglia, V. Rana, R. Zurla, A. Cabrini, and G. Torelli, A 32KB 18ns random access time embedded PCM with enhanced program throughput for automotive and smart power applications, Proceedings 43rd European Solid State Circuits Conference (ESSCIRC), Leuven (Belgium), 11-14 September 2017, pp. 320-323. DOI 10.1109/ESSCIRC.2017.8094590
5.	Prof. Abdelali El Aroudi	Journal Papers
		[1] L. Benadero, E. Ponce, A. El Aroudi, and F. Torres, limit cycle bifurcations in resonant LC power inverters under zero current switching strategy,Nonlinear Dynamics, vol. 91, no. 2, pp. 1145-1161, Jan, 2018.
		[2] R. Errouissi, A. Al-Durra, S. M. Muyeen, and A. El Aroudi, robust Feedback Linearization Control of a Boost Converter Feeding a Grid-Tied Inverter for PV Applications,?IET Power Electronics, vol. 11, no. , 20, pp. 557-565, 2018.
		[3] Y. Al-Turki, A. El Aroudi, K. Mandal, D. Giaouris, A. Abusorrah, M. Al Hindawi, and S. Banerjee, nonaveraged Control-Oriented Modeling and Relative Stability Analysis of DC-DC Switching Converters, International Journal of Circuit Theory and Applications, vol. 46, no. 3, pp. 565-580, March 2018.
		[4] El Aroudi, W.G. Lu, M. Al-Numay, and H. H. C. Iu, Combined Analytical-Numerical Methodology for Predicting Subharmonic Oscillation in H-Bridge Inverters Under Double Edge Modulation,?IEEE Transactions on Circuits and Systems-I, in press, DOI: 10.1109/TCSI.2017.2780318, 2017.
		[5] A. El Aroudi, G. Garcia, K. Al Hosani, N. Al Syari, M. Al-Numay, nalytical Multi-Parametric Stability Boundaries of DC-DC Buck Converters Under V1 Control Concept, International Journal of Circuit Theory and Applications, vol. 45, no.11, pp. 1686?700, 2017.
		[6] A. Abusorrah, K. Mandal, D. Giaouris, A. El Aroudi, M. Al Hindawi, Y. Al-Turki and S. Banerjee, avoiding Instabilities in Power Electronic Systems: Toward an On-Chip Implementation,?IET Power Electronics, vol. 10, no. . 13, pp. 1778-1787, 2017.
		[7] M. Bodetto, A. El Aroudi, A. Cid-Pastor, M. Al-Numay, improving the Dimming Performance of Low-Power Single-Stage AC-DC HBLED Drivers, IEEE Transactions on Industrial Electronics, vol. 64, no. 7, pp. 5797 -5806, 2017.
		[8] A. El Aroudi, A New Approach for Accurate Prediction of Subharmonic Oscillation in Switching Regulators-Part I: Mathematical Derivations, IEEE Transactions on Power Electronics, vol. 32, no. 7, pp. 5651-5651, July 2017.
		[9] A. El Aroudi, New Approach for Accurate Prediction of Subharmonic Oscillation in Switching Regulators-Part II: Case studies, IEEE Transactions on Power Electronics, vol. 32, no. 7, pp. 5835-5849, July 2017.
		Conference Papers
		[1] B Martinez-Treviño, R Jammes, A El Aroudi, L Martinez-Salamero, Sliding-mode control of a boost converter supplying a constant power load, IFAC-PapersOnLine 50 (1), 7807-7812
		[2] B Martinez-Trevi,ño A El Aroudi, L Martinez-Salamero, Sliding-mode approach for start-up control and voltage regulation of a boost converter driving a constant power load Circuits and Systems (ISCAS), 2017 IEEE International Symposium on, 1-4
		[3] E Ponce, L Benadero, A El Aroudi, L Martinez-Salamero Sliding bifurcations in resonant inverters Systems, Signals & Devices (SSD), 2017 14th International Multi-Conference.

		[4] A El Aroudi, BA Martinez-Tribi, J Calvente, A Cid-Pastor, ...Sliding-mode control of a boost converter feeding a buck converter operating as a constant power load, Green Energy Conversion Systems (GECS), 2017 International Conference on, 1-7
		[5] A El Aroudi, M Bodetto, A Cid-Pastor, M Al-NumayPower quality issues in single-stage AC-DC HBLED drivers at low power levels: Problems and solutions Green Energy Conversion Systems (GECS), 2017 International Conference on, 1-6
6.	Prof. Gabriel A. Rincon-Mora	**Journal Papers** [1] C. Solis and G.A. Rincón-Mora, "0.6-μm CMOS switched-inductor dual-supply hysteretic current-mode buck converter," IEEE Transactions on Power Electronics (TPE), vol. 32, no. 3, pp. 2387-2394, Mar. 2017. [2] A. Blanco and G.A. Rincón-Mora, "Bootstrapping and Resetting CMOS Starter for Thermoelectric and Photovoltaic Chargers," IEEE Transactions on Circuits and Systems II (TCAS II), vol. 65, no. 2, pp. 156-160, Feb. 2018. [3] C. Solis and G.A. Rincón-Mora, "87%-Efficient 330-mW 0.6-μm Single-Inductor Triple-Output Buck–Boost Power Supply," IEEE Transactions on Power Electronics (TPE), vol. 33, no. 8, pp. 6837-6844, Aug. 2018. [4] A. Blanco and G.A. Rincón-Mora, "Compact Fast-Waking Light/Heat-Harvesting 0.18-μm CMOS Switched-Inductor Charger," IEEE Transactions on Circuits and Systems I (TCAS I), Accepted, Oct. 2017. **Conference Papers**: [1] R.D. Prabha and G.A. Rincón-Mora, "How to Design Battery-Assisted Photovoltaic Switched-Inductor CMOS Charger–Supplies," IEEE International Symposium on Circuits and Systems (ISCAS), Baltimore, Maryland, May 28-31, 2017. [2] C. Solis and G.A. Rincón-Mora, "Stability and Design of Hysteretic Current-Mode Single-Inductor Multiple-Output Power Supplies," IEEE Midwest Symposium on Circuits and Systems (MWSCAS), Invited (Special Session), Boston, Massachusetts, August 6-9, 2017. [3] N. Xing and G.A. Rincón-Mora, "Loss Analysis and Maximum Output Power Scheme in Inductively Coupled Receivers," IEEE Midwest Symposium on Circuits and Systems (MWSCAS), Invited (Special Session), Boston, Massachusetts, August 6-9, 2017. [4] D. Janke and G.A. Rincón-Mora, "Ripple Suppression of On-Chip Switched-Inductor Power Supplies," IEEE International Symposium on Circuits and Systems (ISCAS), Invited, Florence, Italy, May 27-30, 2018.
7.	Prof. Tyrone Fernando	**Journal Papers** [1] P. Jin, G. Wang, H.H.C. Iu and T. Fernando, "A Locally-Active Memristor and its Application in Chaotic Circuit," IEEE Transactions on Circuits and Systems Part II, Vol. 65, No. 2, pp. 246-250, Feb 2018. [2] W. Xie, B. Ma, T. Fernando and H.H.C. Iu, "A New Formation Control of Multiple Underactuated Surface Vessels," International Journal of Control, DOI: 10.1080/00207179.2017.1303849, 2017. [3] T.K. Chau, S. Yu, T. Fernando, H.H.C. Iu and M. Small, "A Novel Control Strategy of DFIG Wind Turbines in Complex Power Systems for Enhancement of Primary Frequency Response and LFOD," IEEE Transactions on Power Systems, DOI: 10.1109/TPWRS.2017.2726160, 2017. [4] S Yu, TK Chau, T Fernando, HHC Iu, "Towards LFOD Enhancement for DFIG Wind Farm Integrated Power Systems: An Extended APPOD Approach with Latency Compensation," IEEE Transactions on Power Systems, DOI: 10.1109/TPWRS.2017.2773632, 2017. [5] G Zhang, HHC Iu, B Zhang, Z Li, T Fernando, S Chen, Y Zhang, "An Impedance Networks Boost Converter with High-voltage Gain," IEEE

		Transactions on Power Electronics 32 (9), 6661-6665, 2017.
		[6] L Fei, H Fengyou, Z Ye, T Fernando, X Wang, X Zhang, "A Simplified PWM Strategy for Three-Level Converters on Three-phase Four-wire Active Power Filter," IEEE Transactions on Power Electronics, DOI: 10.1109/TPEL.2017.2715498, 2017.
		[7] X. Liu, L. Li, Z. Li, X. Chen, T. Fernando, H.H.C. Iu and G. He, "Event-trigger Particle Filter for Smart Grid with Limited Communication Bandwidth Infrastructure," IEEE Transactions on Smart Grid, DOI: 10.1109/TSG.2017.2728687, 2017.
		[8] K Emami, H Ariakia, T Fernando, "A Functional Observer Based Dynamic State Estimation Technique for Grid Connected Solid Oxide Fuel Cells," IEEE Transactions on Energy Conversion, DOI: 10.1109/TEC.2017.2739153, 2017.
		[9] T.K. Chau, S. Yu, T. Fernando, H.H.C. Iu and M. Small, "A Load-Forecasting-Based Adaptive Parameter Optimization Strategy of STATCOM Using ANNs for Enhancement of LFOD in Power Grids," IEEE Transactions on Industrial Informatics, DOI: 10.1109/TII.2017.2767069, 2017.
		[10] S. Yu, T.K. Chau, T. Fernando and H.H.C. Iu, "An Enhanced Adaptive Phasor Power Oscillation Damping Approach with Latency Compensation for Modern Power Systems," IEEE Transactions on Power Systems, DOI: 10.1109/TPWRS.2017.2773632, 2017.

5. Patents

1	Prof. Giulia Di Capua	[1] D. Sannino, O. Sacco, V. Vaiano, D. Pilerci, G. Di Capua, N. Femia, G. Petrone, G. Spagnuolo, W. Zamboni, Apparato depuratore basato su fotocatalisi mediante modulazione dell'emissione luminosa, Italian Patent 1430022, N. RM2015A000147 ?102015902343602, Universit?degli Studi di Salerno.
2.	Guido Torelli	[1] M. Pasotti, R. Zurla, A. Cabrini, and G. Torelli, "System and method for a multistage operational amplifier",Assignee: STMicroelectronics S.r.l., Agrate Brianza, Italy; US Patent Application 15/192863, filed 24 June 2016, publication date 28 December 2017; U.S. Patent 9,893,689, issued 13 February 2018. [# Other member] A. Cabrini.

6. Awards, Honors:

1.	Prof. Gabriel A. Rincon-Mora	Elected Fellow of the American National Academy of Inventors (NAI), 2017.* Elected IEEE Distinguished Lecturer, Circuits and Systems Society (CASS), 2018-2019. Thanks for Being a Great Teacher certificate, Georgia Institute of Technology (Georgia Tech), 2018.

7. Other IEEE Service:

1.	Prof. Ke-Horng Chen	Director of Board, IEEE Taipei Section, since 2017.
2.	Prof. Gabriel A.	Technical Program Co-Chair, IEEE International Symposium on Circuits and Systems (ISCAS), Sapporo, Japan, May 2019.

	Rincon-Mora	

8. Other Professional Service:

9. Media and Popular Press:

1	Prof. Giulia Di Capua	[1] CAS Society News - SMACD 2017 & PRIME 2017 Report November 2017, IEEE Circuits and Systems Magazine, DOI 10.1109/MCAS.2017.2757079. Journal: IEEE Circuits and Systems Magazine 17, 4. [2] SMACD 2017 - Conference Proceedings Front Matter, July 2017. IEEE, DOI 10.1109/SMACD.2017.7981555

10. Highlights on cooperation within the TC and with other TCs

1	Prof. Giulia Di Capua	[1] Organizer of a Special Session for ISCAS 2018, on the subject "Modeling, design, diagnostics and control of power converters with nonlinear passive power components" with Alberto Oliveri (NCAS member)

Endorsement of Conferences and Workshops
The TC practiced in the endorsement of the conference DCIS in Barcelona (https://dcis2017.upc.edu/en)