
Rui Paulo da Silva Martins

Curriculum Vitæ

January 2025



BIOGRAPHY

Rui P. Martins (**IEEE** Member'88 – Senior Member'99 – *Fellow'08* – **Life Fellow'24**), born in April 30, 1957, received the Bachelor, Masters, and Ph.D. degrees, as well as the *Habilitation* to Full-Professor in Electrical Engineering and Computers from the Department of Electrical and Computer Engineering (DECE), Instituto Superior Técnico (IST), University of Lisbon (UL), Portugal, in 1980, 1985, 1992 and 2001, respectively. He has been with the DECE / IST, UL, since October 1980, where he is a *Full Professor*.

Since Oct. 1992, has been on leave from UL and is with the DECE, Faculty of Science and Technology (FST), University of Macau (UM), Macao, China, where he is a *Chair-Professor* since Aug. 2013. In FST, he was Dean (1994-1997), and has been UM's Vice-Rector since Sep. 1997. From Sep. 2008 to Aug. 2018, Vice-Rector (Research) and from Sep. 2018 to Jun. 2027, Vice-Rector (Global Affairs).

Within the scope of his academic activity, taught 21 bachelor and master courses and, in UM, supervised (or co-supervised) 47 theses, Ph.D. (26) and Masters (21). Authored or Co-authored a total of 1,063 publications: 10 books and 14 book chapters; 71 Patents, USA (42), China (26) & Taiwan (3); 888 papers, in scientific journals (420) and in conference proceedings (468); as well as other 80 academic works (*h-index=59/citations>16,000, Google Scholar*). He created in 2003 the *Analog and Mixed-Signal VLSI Research Laboratory* of UM, elevated in January 2011 to State Key Laboratory (SKLAB) of China (the 1st in Engineering in Macao), being its Founding Director (2011-2022). He is now the Director of the Institute of Microelectronics (IME) since 2019. He was the Founding Chair of UMTEC (UM company) from January 2009 to March 2019, supporting the incubation and creation in 2018 of *Digifluidic*, the first UM Spin-Off, whose CEO is a SKLAB PhD graduate. He was also a co-founder of Chipidea Microelectronics (Macao) [later Synopsys-Macao, later Akrostar, and now Silergy, where the CEO was his Ph.D. student, with double-degree FST-UM/IST-UTL] in 2001/2002.

Prof. Rui Martins is an *IEEE Life Fellow*, was Founding Chair of IEEE Macau Section (2003-2005) and IEEE Macau Joint-Chapter on Circuits And Systems (CAS) / Communications (COM) (2005-2008) [*2009 World Chapter of the Year of IEEE CAS Society (CASS)*], General Chair IEEE Asia-Pacific Conference on CAS – *APCCAS'2008*, Vice-President (VP) Region 10 (Asia, Australia and Pacific) (2009-2011) and VP-World Regional Activities and Membership of *IEEE CASS* (2012-2013), Associate-Editor of *IEEE Transactions on CAS II: Express Briefs* (2010-2013), nominated *Best Associate Editor* (2012-2013). He is a member of the Advisory Board of the *Journal of Semiconductors* of the Chinese Institute of Electronics (CIE), Institute of Semiconductors, Chinese Academy of Sciences, since January 2021, and a Fellow of the Asia-Pacific Artificial Intelligent Association since October 2021. He was also member of: *IEEE CASS* Fellow Evaluation Committee (2013, 2014, 2018 – Chair, 2019, 2021 & 2022 – Vice-Chair); *IEEE* Nominating Committee of Division I Director (CASS/EDS/SSCS) (2014);

and *IEEE CASS* Nominations Committee (2016-2017). In addition, he was General Chair of ACM/IEEE Asia South Pacific Design Automation Conference – *ASP-DAC'2016*, receiving the *IEEE Council on Electronic Design Automation (CEDA) Outstanding Service Award in 2016*, and also General Chair of the IEEE Asian Solid-State Circuits Conference – *A-SSCC 2019*. He was Vice-President (2005-2014), President (2014-2017) and now again Vice-President (2021-2027) of the *Association of Portuguese Speaking Universities (AULP)*, in September 2021 was nominated *Honorary Member of AULP* (honor only bestowed on 5 people in the world). He received 3 Macao Government decorations: Medal of Professional Merit (Portuguese-1999); Honorary Title of Value (Chinese-2001) and Medal of Merit in Education (Chinese-2021). He received an *Author Recognition Award* at the 70 years of the *IEEE International Solid-State Circuits Conference - ISSCC*, San Francisco, California, USA, in Feb. 2023, as a *Top Contributor* with more than 50 papers. He also received a National Award for Electrical Engineering by "*Ordem dos Engenheiros*" in Lisbon, Portugal in 2024, attribution given for the first time. Since July 2010 was elected, unanimously, to the Lisbon Academy of Sciences, as Corresponding (2010-2022) and Effective Member (from 2022), being the only Portuguese Academician working and living in Asia.

Rui Paulo da Silva Martins

Department of Electrical and Computer Engineering
Faculty of Science and Technology
University of Macau

Age (67)

April 30 **1957**

Born in Arroios, Lisbon, Portugal

Academic Qualifications

Nov 27 **2001**

Habilitation to Full-Professor, Department of Electrical and Computer Engineering (DECE), Instituto Superior Técnico (IST) / Technical University of Lisbon (TU of Lisbon), Portugal.

[Synthesis Lesson: *Advanced CMOS Operational Amplifiers for High-Frequency and Low-Power (Low-Voltage) Filters in Analog/Digital Interfaces*].

Feb 7 **1992**

Doctor of Philosophy in Electrical and Computer Engineering, DECE, IST / TU of Lisbon, Portugal.

[Ph.D. Dissertation: *Multirate Switched-Capacitor Circuits and their High-Frequency Applications*].

Jun 21 **1985**

Master of Science in Electrical and Computer Engineering, DECE, IST / TU of Lisbon, Portugal.

[M.Sc. Thesis: *MOS Operational Amplifiers for Switched-Capacitor Filters*].

Sep 30 **1980**

Bachelor of Electrical Engineering (5-years), DECE, IST / TU of Lisbon, Portugal.

Academic Career

Jan 1 **2019** **Current Term**
[Dec 31 **2024**]

Director, *Institute of Microelectronics*, University of Macau (UM), Macao, China.

Sep 1 **2018** **Current Term**
[Jun 30 **2027**]

Vice-Rector (*Global Affairs*), University of Macau (UM), Macao, China.

Aug 16 **2013** **Current Term**
[Aug 31 **2026**]

Chair Professor, Department of Electrical & Computer Engineering (DECE), Faculty of Science & Technology (FST), UM (on leave from IST / U of Lisbon).

Jan 25	2011	Mar 23	2022	Founding Director , <i>State Key Laboratory of Analog and Mixed-Signal VLSI</i> , University of Macau (UM), Macao, China. [http://www.ime.um.edu.mo/]
Jul	2010	For Life		Academician , <i>Corresponding Member (2010-2022) & Effective Member (2022)</i> , Classe de Ciências, 7ª Secção Ciências da Engenharia, Academy of Sciences of Lisbon, Portugal. [http://www.acad-ciencias.pt/academia/classe-de-ciencias-efectivos]
Jul 1	2009	Dec 31	2012	Founder & Acting-Dean , Graduate School, UM.
Sep 1	2001	Aug 31	2002	Founder & Acting-Head , Department of Electrical and Computer Engineering, FST / UM.
[Sep 1	2008	Nov 9	2008	Acting-Rector , University of Macau (UM), Macao, China.]
Sep 1	1997	Dec 12	2018	Vice-Rector (Research) , University of Macau (UM), Macao, China [cumulative with VR Global Affairs from Sep.1, 2018].
Feb 17	1998	Aug 15	2013	Full-Professor , Department of Electrical and Computer Engineering (DECE), Faculty of Science and Technology (FST), UM (on leave from IST / TU of Lisbon).
Jul 1	1994	Aug 31	1997	Dean , Faculty of Science and Technology, UM.
Jan 1	1994	Jun 30	1994	Associate Dean , Faculty of Science & Technology, UM.
Nov	1993	Present		Principal Investigator , <i>Microelectronics</i> , DECE / FST / UM [UM Key Research Area since 2008, Founder of <i>UM Analog and Mixed-Signal VLSI Research Lab</i> now a <i>State Key Lab</i>].
Apr 1	1993	Oct 11	1994	Director , Centre of Scientific and Technical Research / FST / UM.
Oct 16	1992	Feb 16	1998	Associate Professor , DEEE / FST / UM.

Portugal

Jun 1	2023	Present		Full Professor , DECE / IST / U of Lisbon.
Mar 20	2002	May 31	2023	Associate Professor , DECE / IST / TU of Lisbon.
Feb 7	1992	Mar 19	2001	Assistant Professor , DECE / IST / TU of Lisbon.
Apr 28	1983	Feb 6	1992	Lecturer , DECE / IST / TU of Lisbon, Portugal.
Oct 1	1980	Apr 27	1983	Teaching and Research Assistant , DECE / IST / TU of Lisbon, Portugal.

Awards (Self, with Colleagues or Students & from a Team of former Ph.D. Students) [47]

47.	Nov	2024		[Macao Science & Technology Award] Technology Invention – 3rd Prize , “Building a Low-Carbon Smart-City - Advanced Power Electronic Circuits and Their Key Control Techniques”, (Won by Chi-Seng Lam, Pui-In Mak and R.P.Martins), Macao, China.
46.	Sep	2024		[National Award for Electrical Engineering] “Ordem dos Engenheiros” , (Won by R.P.Martins), Lisbon, Portugal.
45.	May	2023		[Gold Medal] 48th Geneva International Exhibition of Inventions , “Low-Cost Advanced Controlled Hybrid Active Power Filtering Devices”, (Won by Io-Wa Iam, Pak-Ian Chan, Wai-Kit Sou, Cheng-Gong, Chi-Seng Lam, Pui-In Mak and R.P.Martins), Geneva, Switzerland.
44.	May	2023		[Bronze Medal] 48th Geneva International Exhibition of Inventions , “An Efficient and Easy-Adaptation Wireless Charging Solution”, (Won by Io-Wa Iam, Pak-Ian Chan, Wai-Kit Sou, Cheng-Gong, Chi-Seng Lam, Pui-In Mak and R.P.Martins), Geneva, Switzerland.
43.	Feb	2023		[Top Contributor with more than 50 Papers – Author Recognition Award] 70th Edition of the International Solid-State Circuits Conference - ISSCC , (Won by R.P.Martins), San Francisco, California, USA.
42.	Oct	2022		[Macao Science & Technology Award] Technology Invention – 3rd Prize , “Digital Microfluidic System for Point-of-Care Nucleic Acids Detection”, (Won by Yanwei Jia, Law Man Kay, Pui-In Mak and R.P.Martins), Macao, China.

41. Oct 2020 **[Macao Science & Technology Award] Technology Invention – 1st Prize**, “Enabling Internet-of-Everything (IoT) Connectivity with Advanced Electronic Chips”, (Won by Pui-In Mak, Law Man Kay, Jun Yin, Yong Chen and R.P.Martins), Macao, China.
40. Oct 2020 **[Macao Science & Technology Award] Technology Invention – 2nd Prize**, “Leading-Edge-Efficiency Data and Power Conversion Integrated Circuit Designs for Emerging Systems”, (Won by Chi-Hang Chan, Yan Zhu, Yan Lu, Sai-Weng Sin and R.P.Martins), Macao, China.
39. Feb 2018 **ISSCC 2018 - Takuo Sugano Award for Outstanding Far-East Paper**, (Mo Huang – Post-Doc, 1st Author), in **Digest of Technical Papers from IEEE International Solid-State Circuits Conference – ISSCC 2017**, vol.60, pp.376-377, San Francisco, USA.
38. Jan 2018 **ASP-DAC 2018 - University LSI Design Contest Special Feature Award**, (Junmin Jiang – Ph.D. Student, 1st Author), in **Proc. Asia and South Pacific Design Automation Conference - ASP-DAC 2018**, Jeju, Korea.
37. Jan 2017 **IEEE Council on Electronic Design Automation (CEDA), Outstanding Service Award 2016**, Tokyo, Japan.
36. Oct 2016 **[Macao Science & Technology Award] Technology Invention – 2nd Prize**, “Multi-Standard Wireless and Multi-Physical-Sensing Chips for Functionality Extension of Next-Generation Smart Mobiles”, (Won by Pui-In Mak and R.P.Martins), Macao, China.
35. Feb 2016 **ISSCC 2016 - Silk-Road Award for a Ph.D. Student from IEEE R-10**, (Ka-Meng Lei – Ph.D. Student, 1st Author), in **Digest of Technical Papers from IEEE International Solid-State Circuits Conference – ISSCC 2016**, vol. 59, pp.474-475, San Francisco, USA.
34. Nov 2015 **A-SSCC 2015 – Distinguished Design Award/Student Design Contest**, (Ka-Meng Lei – Ph.D. Student, 1st Author), in **Proc. IEEE Asian Solid-State Circuits Conference – A-SSCC 2015**, pp.19-1-19-4, Xiamen, Fujian, China.
33. Nov 2015 **TENCON 2015 – Professional Award** (Mo Huang – Ph.D Student, 1st Author), in **Proc. IEEE Region 10 Conference - TENCON 2015**, pp.1-4, Macao, China.
32. Feb 2015 **ISSCC 2015 – 2 IEEE SSCS Pre-doctoral Achievement Awards**, (Zhicheng Lin & Chi-Hang Chan – Ph.D. Students, 1st Authors), in **Digest of Technical Papers from IEEE International Solid-State Circuits Conference – ISSCC 2015**, San Francisco, USA.
31. Nov 2014 **2014 Business Awards of Macau – Innovation Excellence Award**, “State Key Lab of Analog and Mixed-Signal VLSI”, Macao, China.
30. Oct 2014 **[Macao Science & Technology Award] Technology Invention – 2nd Prize**, “Analog and Radio Frequency Microelectronics Turn-Key Interfaces for Ubiquitous Wireless Connectivity”, (Won by Pui-In Mak, Law Man Kay, R.P.Martins), Macao, China.
29. Sep 2014 **Best Paper Award**, in **Proc. IEEE European Solid-State Circuits Conference – ESSCIRC’2014**, pp.211-214, Venice, Italy.
28. Feb 2014 **ISSCC 2014 - IEEE SSCS Pre-doctoral Achievement Award**, (Zushu Yan – Ph.D. Student, 1st Author), in **Digest of Technical Papers from IEEE International Solid-State Circuits Conference – ISSCC 2014**, San Francisco, USA.
27. Jan 2014 **Best Associate Editor for 2012 to 2013 of IEEE Transactions on Circuits and Systems II**.
26. Aug 2013 **Best Paper Award**, in **Proc. IEEE 5th Asia Symposium on Quality Electronic Design - ASQED 2013**, pp.216–219, Penang, Malaysia.
25. [Feb 2013 **[2012 Best Chapter (World) Award] IEEE Solid-State Circuits Society (@ Diamond Jubilee – 60 Years - of ISSCC), IEEE Macau Chapter on SSC**, (Won by Chapter Chair Seng-Pan U and Chapter Secretary Sai-Weng Sin, Former Ph.D. Students – Attributed based mainly on the activity of the State Key Laboratory of Analog and Mixed-Signal VLSI)]
24. Oct 2012 **[Macao Science & Technology Award] Technology Invention – 2nd Prize**, “Analog and Mixed- Signal Interface for a Ubiquitous Electronic World”, (Won by R.P.Martins, Seng-Pan U, Pui-In Mak, Sai-Weng Sin), Macao, China.

- 23. Jun 2012** **Student Travel Award**, in Proc. IEEE Symposium on VLSI Circuits - **VLSI 2012**, pp.86-87, Hawaii, USA.
- 22. [Feb 2012** **[China National Award] Second Class Award of The State Scientific and Technological Progress Award**, "The Design & Development of High-Performance Analog & Mixed-Signal IC Technology", (Won by Seng-Pan U, Pui-In Mak, Sai-Weng Sin - Team of former Ph.D., Master and Bachelor Students), **Beijing, China. First-Time a National S&T Award Attributed to Macao]**
- 21. Nov 2011** **Student Paper Award (Most voted)**, in Proc. IEEE Asian Solid-State Circuits Conference - **A-SSCC 2011**, pp.61-64, Jeju, South-Korea.
- 20. Oct 2011** **Gold Leaf Certificate**, in Proc. IEEE Ph.D. Research in Microelectronics and Electronics Conference Asia - **PRIMEASIA'2011**, pp.131-134, Macao, China.
- 19. Oct 2011** **Silver Leaf Certificate**, in Proc. IEEE Ph.D. Research in Microelectronics and Electronics Conference Asia - **PRIMEASIA'2011**, pp.119-122, Macao, China.
- 18. Oct 2011** **Bronze Leaf Certificate**, in Proc. IEEE Ph.D. Research in Microelectronics and Electronics Conference Asia - **PRIMEASIA'2011**, pp.1-4, Macao, China.
- 17. Feb 2011** **ISSCC 2011 - Silk-Road Award for a Ph.D. Student from IEEE R-10**, (He-Gong Wei - Ph.D. Student, 1st Author), in **Digest of Technical Papers from IEEE International Solid-State Circuits Conference - ISSCC 2011**, pp.188-190, **San Francisco, USA.**
- 16. Jun 2010** **2010 Outstanding Young Author Award**, from IEEE CAS Society (Pui-In Mak - 1st author), in **IEEE Transactions on CAS - Part I: Regular Papers**, vol. 56, No.5, pp.933-942, **May 2009.**
- 15. Sep 2009** **Gold Leaf Certificate**, in Proc. IEEE Ph.D. Research in Microelectronics and Electronics Conference Asia - **PRIMEASIA'2009**, pp.165-168, Shanghai, China.
- 14. Sep 2009** **Silver Leaf Certificate**, in Proc. IEEE Ph.D. Research in Microelectronics and Electronics Conference Asia - **PRIMEASIA'2009**, pp.117-120, Shanghai, China.
- 13. Jun 2009** **Certificate of Merit**, Innovative Entrepreneurship in the Portuguese Diaspora - Award, Lisbon, Portugal.
- 12. May 2009** **[2009 World Chapter of the Year] IEEE Circuits And Systems Society, IEEE Macau Joint-Chapter on CAS/COM, Founding Chapter Chair 2005-2008.**
- 11. Dec 2008** **Certificate of Merit**, in IEEE Asia-Pacific Conference on Circuits and Systems - **APCCAS'2008**, Macao, China.
- 10. Jan 2008** **IEEE Fellow, "For leadership in engineering education".**
- 9. Jun 2007** **Most Favourite Teacher**, elected by the students of DEEE / FST / UM.
- 8. Jul 2006** **Two Certificates of Merit**, in IEEE Regional Inter-University Post-graduate Electrical and Electronic Engineering Conference - **RIUPEEE'2006**, Macao, China.
- 7. Jul 2005** **Silver Leaf Certificate**, in Proc. IEEE Ph.D. Research in Microelectronics and Electronics Conference - **PRIME'2005**, Volume I, pp.223-226, École Polytechnique Fédéral de Lausanne - EPFL, Lausanne, Switzerland.
- 6. Jul 2005** **Certificate of Merit**, in IEEE Regional Inter-University Post-graduate Electrical and Electronic Engineering Conference - **RIUPEEE'2005**, Hong Kong, China.
- 5. Feb/Jan 2005** **Award for Second Place / Conceptual Architecture Category**, in IEEE 52nd Edition International Solid-State Circuits Conference - **ISSCC'2005** (San Francisco) & 42nd Edition of Design Automation Conference - **DAC'2005** (Anaheim), California, USA.
- 4. May 2005** **Certificate of Merit**, in IEEE International Symposium on Circuits and Systems - **ISCAS'2005**, Kobe, Japan.
- 3. Oct 2004** **Best Paper Award**, in IEEE / IEE Japan 7th International Analog VLSI Workshop - **AVLSIWS'2004**, Macao, China.
- 2. Jul 2004** **Best Paper Award - Second Place**, in IEEE Midwest Symposium on Circuits and Systems - **MWSCAS'2004**, Hiroshima, Japan.
- 1. Oct 2003** **Best Paper Award**, in IEEE International Conference on ASIC - **ASICON'2003**, Beijing, China.

Decorations & Distinctions [4]

Dec 19	2021	Medal of Merit in Education , Decoration attributed by the Macao Special Administrative Region Government (Chinese Administration), Macao, China. https://ime.um.edu.mo/news_events/prof-rui-martins-receives-medal-of-merit-from-macao-sar-government/
Sep 17	2021	Honorary Member of AULP , "In gratitude and tribute for his valuable contribution to this institution, highlighting his high academic diplomacy and effort in the union of higher education institutions that are members of the association, having assumed the Vice-Presidency for 9 years and the Presidency of the AULP on behalf of the Rector of University of Macau, between 2014 and 2017, highlighting his associative dedication.", AULP - Associação das Universidades de Língua Portuguesa. https://aulp.org/membros-honorarios/
Dec 19	2001	Honorary Title of Value , Decoration attributed by the Macao Special Administrative Region Government (Chinese Administration), Macao, China.
Dec 10	1999	Medal of Merit (Class of Professional Merit) , Decoration attributed by the Macao Government (Portuguese Administration), Macao.

Professional Activity (*in the International Scientific Community*)

Professional Association (Institute Electrical Electronics Engineers-IEEE, CIE)

Jan 1	2024	IEEE Life Fellow.
Oct 1	2021	Fellow of the <i>Asia-Pacific Artificial Intelligent Association</i> .
Jan 1	2021	Dec 31 2023 Member, Advisory Board, Journal of Semiconductors, Chinese Institute of Electronics – CIE, Institute of Semiconductors, Chinese Academy of Sciences.
Jan 1	2021	Dec 31 2021 Vice-Chair, IEEE CASS Fellow Evaluation Committee, Class 2022.
Jan 1	2020	Dec 31 2020 Vice-Chair, IEEE CASS Fellow Evaluation Committee, Class 2021.
Jan 1	2018	Dec 31 2018 Member, IEEE CASS Fellow Evaluation Committee, Class of 2019.
Jan 1	2017	Dec 31 2017 Chair, IEEE Circuits And Systems Society (CASS) Fellow Evaluation Committee, Class 2018.
Jan 1	2016	Dec 31 2016 Member, Nominations Committee, IEEE CAS Society.
Jan 1	2014	Dec 31 2014 Member, Nominating Committee, Division I (CASS, EDS, SSCS) – Director of IEEE, Representative of IEEE CASS.
Jan 1	2012	Dec 31 2013 Vice-President (World), Regional Activities and Membership of the IEEE CASS.
Jan 1	2012	Dec 31 2013 Member, IEEE CASS Fellow Evaluation Committee, Classes of 2013 & 2014.
Jan 1	2010	Dec 31 2013 Associate-Editor, IEEE Transactions on CAS–Part II: Express Briefs, of the IEEE Circuits and Systems Society (CASS) – Best Associate-Editor 2012-2013.
Jan 1	2009	Dec 31 2011 Vice-President, Region 10 (Asia, Australia, the Pacific) of the IEEE Circuits and Systems Society (CASS).

Jan 1	2008		IEEE Fellow [IEEE Member since 1988]. [https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=4481331]
Aug 1	2005	Dec 31	2008 Founding Chairman, IEEE Macau Joint-Chapter CAS/COM ["2009 World-Chapter of the Year" by IEEE CASS].
Nov 14	2003	Dec 31	2005 Founding Chairman, IEEE Macau Section.
	1998		Counselor, UM IEEE Student Branch.

Scientific Reviewer

Nov	2022		External Reviewer , in the tenure-promotion of an Assistant Professor in Electronics [Invited by University of California San Diego (UCSD), USA].
Jun	2022		External Examiner , in the evaluation of a Ph.D. Thesis entitled <i>Wideband Time-Based Data Converters</i> [Invited by Aalto University, Espoo, Finland].
May	2022		External Reviewer , in the evaluation of a research project proposal in the field of <i>Electronics</i> entitled <i>Circuit Scaling through Design: Charge-Injection-Based Analog-to-Digital Converters</i> [Invited by the Swiss National Science Foundation (SNSF), Bern, Switzerland].
Apr	2020		External Reviewer , in the evaluation of a research project proposal in the field of <i>Electronics</i> entitled <i>Hierarchical Analog IC Automatic Synthesis</i> [Invited by Instituto das Telecomunicações – Instituto Superior Técnico, U. Lisboa, Portugal].
Jun	2017		External Reviewer , in the Review of the <i>School of Electronic, Information and Electrical Engineering, Shanghai Jiao Tong University</i> [Invited by the Shanghai Jiao Tong University, China].
Dec	2014		External Examiner , in the evaluation of a Ph.D. Thesis entitled <i>Multiband LTE Power Amplifier for Handset Application</i> [Invited by the University of Malaya].
Jan	2012		External Examiner , in the evaluation of a Ph.D. Thesis entitled <i>Low-Voltage Low-Power Analog-to-Digital Converters</i> [Invited by the National University of Singapore].
Mar	2010		External Examiner , in the evaluation of a research project proposal in the field of <i>Prognostics and System Health Management (PHM)</i> [Invited by the Research Grants & Contracts Office of the City University of Hong Kong].
Jul	2003		External Examiner , in the evaluation of a research project proposal in the field of <i>Microelectronics</i> submitted by Chinese University of Hong Kong [Invited by the Research Grants Council – RGC of the Hong Kong University Grants Committee – UGC].

Reviewer – Scientific Journals

IEEE Journal of Solid-State Circuits
IEEE Transactions on Circuits and Systems I: Regular Papers
IEEE Transactions on Circuits and Systems II: Express Briefs
IEEE Transactions on VLSI Systems
IET Electronics Letters
IET Circuits Devices & Systems
Journal for Optimization and Engineering (Springer)
Journal of Circuits, Systems & Computers (World Scientific-Japan)
Analog Integrated Circuits & Signal Processing Journal (Springer)
International Journal of Circuit Theory and Applications (Wiley-Interscience)
IEEE Transactions on CAS I: Fundamental Theory and Applications (2000–2003)

IEEE Transactions on CAS II: Analog and Digital Signal Processing (2000-2003)
IEE Electronics Letters (1992-2006)

Reviewer – Conferences

IEEE European Solid-State Circuits Conference – ESSCIRC
IEEE International Symposium on Circuits and Systems – ISCAS
IEEE Asian Solid-State Circuits Conference – ASSCC
IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS
IEEE Phd Research In Microelectronics & Electronics ASIA – PRIMEASIA
IEEE Phd Research In Microelectronics & Electronics – PRIME
IEEE Design of Circuits and Integrated Systems – DCIS

Conferences Organization (53)

Aug	2022			53. Workshop on <i>Integrated Circuits Advances in China – ICAC’2022</i> , Shenzhen, China, Honorary Co-Chair
Sep 16	2021	Sep 17	2021	52. XXX Annual Meeting of the Association of Portuguese Speaking Universities – AULP’2021 , Macao, China, Scientific Program Committee Chair [by Zoom]
May	2021			51. Workshop on <i>Integrated Circuits Advances in China – ICAC’2021</i> , Shenzhen, China, Honorary Co-Chair
Jun	2020			50. Workshop on <i>Integrated Circuits Advances in China – ICAC’2020</i> , Macao, China, by Zoom, Honorary Co-Chair
Nov	2019			49. <i>IEEE Asian Solid-State Circuits Conference – ASSCC’2019</i> , Macao, China, General Chair
May	2019			48. <i>IEEE International Symposium on Circuits and Systems – ISCAS’2019</i> , Sapporo, Hokkaido, Japan, International Advisory Committee
Apr	2019			47. Workshop on <i>Integrated Circuits Advances in China – ICAC’2019</i> , Chengdu, Sichuan, China, Honorary Co-Chair
May 27	2018	May 30	2018	46. <i>IEEE International Symposium on Circuits and Systems – ISCAS’2018</i> , Florence, Italy, Plenary Co-Chair
Jan 15	2017	Jan 18	2017	45. ACM & <i>IEEE Asia South Pacific Design Automation Conference – ASP-DAC’2017</i> , Tokyo, Japan, International Steering Committee
Oct 25	2016	Oct 28	2016	44. 13 th <i>IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS’2016</i> , Jeju, South Korea, International Advisory Committee Co-Chair
Feb 1	2016	Feb 4	2016	43. ACM & <i>IEEE Asia South Pacific Design Automation Conference – ASP-DAC’2016</i> , Macao, China, General Chair
Nov 27	2015	Nov 29	2015	42. 6 th <i>IEEE Asia-Pacific Conference on Postgraduate Research in Microelectronics and Electronics – PRIMEASIA’2015</i> , Hyderabad, India, General Co-Chair
Jun	2011	Jul	2018	34-41. <i>IEEE Ph.D. Research in Microelectronics and Electronics PRIME’2011-2018</i> , Technical Program Committee
Nov 17	2014	Nov 20	2014	33. 12 th <i>IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS’2014</i> , Ishigaki, Okinawa, Jaipan, International Steering Committee Chair
Sep 17	2014	Sep 19	2014	32. XXIV Annual Meeting of the Association of Portuguese Speaking Universities – AULP’2014 , Macao, China, Scientific Program Committee Chair
Dec 19	2013	Dec 21	2013	31. 5 th <i>IEEE Asia-Pacific Conference on Postgraduate Research in Microelectronics and Electronics – PRIMEASIA’2013</i> , Hyderabad, India, International Steering Committee Chair & General Co-Chair
Dec 5	2012	Dec 7	2012	30. 4 th <i>IEEE Asia-Pacific Conference on Postgraduate Research in Microelectronics and Electronics – PRIMEASIA’2012</i> , Hyderabad, India, International Steering Committee Chair & General Co-Chair
Dec 2	2012	Dec 5	2012	29. 11 th <i>IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS’2012</i> , Kaohsiung, Taiwan, International Steering Committee Chair
Oct 6	2011	Oct 8	2011	28. 3 rd <i>IEEE Asia-Pacific Conference on Postgraduate Research in Microelectronics and Electronics – PRIMEASIA’2011</i> , Macao, China, General Chair

Jun 30	2011	Jul 1	2011	27. 10th IEEE International Symposium on Signals, Circuits and Systems – ISSCS'2011 , Iasi, Romania, Technical Program Committee
Dec 6	2010	Dec 9	2010	26. 10th IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS'2010 , Kuala Lumpur, Malaysia, International Steering Committee Chair
Sep 13	2010	Sep 17	2010	25. 36th IEEE European Solid-State Circuits Conference – ESSCIRC'2010 , Seville, Spain, Technical Program Committee Member & Co-Chair of the Analog Circuits Sub-Committee
Sep 6	2010	Sep 10	2010	24. XX Annual Meeting of the Association of Portuguese Speaking Universities – AULP'2010 , Macao, China, Scientific Program Committee Chair
Jan 12	2010	Jan 14	2010	23. 2nd IEEE International Conference on Frontiers of Prognostics & Health Management – PHM'2010 , Macao, China, (jointly organized by CALCE/University of Maryland, City University of Hong Kong and UM), Conference Co-Chair
Dec 7	2009	Dec 10	2009	22. 7th IEEE International Conference on Information, Communications and Signal Processing – ICICS'2009 , Macao, China, (jointly organized by Nanyang Technological University, Singapore and UM), Honorary Conference Co-Chair
Nov 31	2008	Dec 3	2008	21. 9th IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS'2008 , Macao, China, General Chair
May 27	2008	May 28	2008	20. Jean Monnet Conference – The European Union at 50: Assessing the Past, Looking Ahead , UM, Macao, China, (jointly supported by the European Union and UM), Organizing Committee
Dec 4	2006	Dec 6	2006	19. 8th IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS'2006 , Singapore, Technical Program Committee
Aug 24	2006	Aug 27	2006	18. 10th IEEE Cross-Strait Tri-Regional Radio, Science & Wireless Technology conference – CSTRWC'2006 , UM, Macao, China, (supported by IEEE Macau, H.K., Beijing & Taipei Sections), General Chair
Jul 13	2006	Jul 14	2006	17. 4th IEEE / IEE Regional Inter-University Postgraduate Electrical and Electronics Engineering Conference – RIUPEEEEC'2006 , UM, Macao, China, (supported by IEEE Macau & H.K. Sections and IEE H.K.), General Chair
Jun 12	2006	Jun 16	2006	16. XVI Annual Meeting of the Association of Portuguese Speaking Universities – AULP'2006 , Macao, China, Scientific Program Committee Chair
Jun 12	2006	Jun 15	2006	15. IEEE Ph.D. Research in Microelectronics and Electronics – PRIME'2006 , Otranto, Lecce, Italy, Technical Program Committee
Dec 11	2005	Dec 13	2005	14. IEEE 2005 Asia-Pacific Workshop on Visual Information Processing – VIP'2005 , Hong Kong, China, Advisory Committee
Nov 30	2005	Dec 2	2005	13. 4th International Conference on Wavelet Analysis and its Applications – WAA'2005 , UM, Macao, China, (supported by IEEE Macau Section), Honorary Chair
Jul 14	2005	Jul 15	2005	12. IEEE / IEE Regional Inter-University Postgraduate Electrical and Electronics Engineering Conference – RIUPEEEEC'2005 , Hong Kong, China, (supported by IEEE H.K. & Macau Sections and IEE Hong Kong), Advisory Committee
Jun 29	2005	Jul 3	2005	11. IEEE International Conference on Robotics & Biomimetics – ROBIO'2005 , Hong Kong & Macao, China, (supported by IEEE H.K. & Macau Sections), Academic Advisory Board
Jun 14	2005	Jun 16	2005	10. 9th IEEE International Symposium on Consumer Electronics – ISCE'2005 , UM, Macao, China, (supported by IEEE H.K. & Macau Sections), Organizing Committee Chair – Macao
Apr 27	2005	Apr 30	2005	9. IEEE 2005 International Conference on Asian Green Electronics , Pudong, Shanghai, China, Academic Advisory Board
Dec 6	2004	Dec 9	2004	8. 7th IEEE Asia-Pacific Conference on Circuits and Systems – APCCAS'2004 , Tainan, Taiwan, Technical Program Committee

Nov 30	2004	Dec 2	2004	7. 11th IEEE Annual Conference on Mechatronics and Machine Vision in Practice - M2VIP'2004 , UM, Macao, China, (supported by IEEE H.K. & Macau Sections), Organizing Committee Chair - Macao
Oct 13	2004	Oct 15	2004	6. IEEE / IEE Japan International Analog VLSI Workshop - AVLSIWS'2004 , UM, Macao, China, (supported by IEEE Tokyo CAS Chapter and IEEE Macau Section), General Chair http://www.umac.mo/AVLSIWS2004/
Sep 21	2004	Sep 23	2004	5. IEEE European Solid-State Circuits Conference - ESSCIRC'2004 , Leuven, Belgium, Technical Program Committee
Apr 27	2004	Apr 30	2004	4. IEEE 2004 International Conference on the Business of Electronic Product Reliability and Liability , Shanghai, China, Local Advisory Board
Oct 7	2003	Oct 10	2003	3. XIII Annual Meeting of the Association of Portuguese Speaking Universities - AULP'2003 , Macao, China, Scientific Program Committee Chair
Apr 20	1998	Apr 23	1998	2. VIII Annual Meeting of the Association of Portuguese Speaking Universities - AULP'1998 , Macao, China, Scientific Program Committee Chair
Jul 2	1997	Jul 4	1997	1. 1st International Conference on Technology Policy and Innovation / Management, Assessment, Commercialization, Application and Organization of Science and Technology - Macau'97 , UM, Macao, China, (jointly organized by UM, IST / TU of Lisbon and University of Texas at Austin), General Co-Chair [<i>The other Co-Chair was Prof. Manuel Heitor</i>]

Invited Lectures / Presentations [19]

Feb 5	2024		19. <u><i>"Tradição Europeia no Ensino Superior e na Investigação em Macau : A afirmação de uma Universidade e a liderança de um Laboratório de Investigação"</i></u> , Invited Lecture , Portuguese Academy of Sciences, Lisbon, Portugal .
Nov 7	2022		18. <u><i>"Analog Design: A Sophisticated Automatic Tool or a Skillful Manual Art?"</i></u> , Panel on Analog Design Automation , Asian-SSCC 2022, Taiwan , by Zoom .
Mar 18	2021		17. <u><i>"Electrónica CMOS de Última Geração para a Internet -de-Tudo e Laboratório-em-CMOS"</i></u> , Invited Lecture , Portuguese Academy of Sciences, Lisbon, Portugal , by Zoom .
Mar 18	2021		16. <u><i>"Electrónica CMOS de Última Geração para a Internet-de-Tudo e Laboratório-em-CMOS / Miniaturização e Redução Energética"</i></u> , Keynote Speaker , Panel about Sustainability & New Technologies, International Conference about Sustainable Development , University of Coimbra (Coimbra, Portugal) / University of Santo Amaro (São Paulo, Brazil), by Zoom .
Nov 11	2020		15. <u><i>"From State-of-the-Art CMOS Enabling Internet-of-Everything (IoE) and other Emerging Systems with Leading-Edge-Efficiency Wireless Transceivers, Data and Power Conversion ICs through Lab-on-Chip with Digital Microfluidics towards Lab-on-CMOS"</i></u> , Keynote Speaker , FDCT Projects Presentation 2019/2020, Macao, China .
Feb 22	2017		14. <u><i>"Duas Décadas treinando Cientistas em Macau-De um Deserto a um Laboratório de Referência da China com Destaque no Palco Mundial da Electrónica"</i></u> , Department of ECE Lecture Series , DECE/IST/U of Lisbon, Portugal .

- Mar 16 **2016** **13.**"Two Decades nurturing Scientists in Macao-From a Desert to a State Key Lab of China excelling in the World-Stage of Electronics", **University Lecture Series**, University of Macau, **Macao, China.**
- May 30 **2015** **12.**"Two Decades of Microelectronics in Macao – From a Desert to a State Key Lab of China and Beyond", **Invited Lecture**, Chao Kuang Pio College, University of Macau, **Macao, China.**
- Oct 8 & 9 **2013** **11.**"Two Decades of Microelectronics in Macao – From a Desert to a State Key Lab of China in Analog and Mixed-Signal VLSI", **Invited Lecture**, (Oct. 8) - National Chiao Tung University, (Oct. 9) - Chip Implementation Center (CIC), **Hsinchu, Taiwan.**
- Feb 10 **2012** **10.**"Duas Décadas de Microelectrónica em Macau – De UM Deserto a um Laboratório de Referência do Estado Chinês", **Invited Lecture**, Portuguese Academy of Sciences, **Lisbon, Portugal.**
- May 18 & 20 **2011** **9.**"Two Decades in Macao Microelectronics – Education, Industry, Scientific Research / State Key Laboratory of Analog and Mixed-Signal VLSI – Locally, from World (Quality) to National (Quantity)", **Invited Seminar** (May 18), Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, & **Invited Speaker** (May 20), IEEE CASS Workshop, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Rio Grande do Sul, **Brazil** [also as a Guest Editorial in *Macao ICT Magazine*, Vol. 7, pp. 6-7, May 2011].
- Mar 28 **2008** **8.**"Why the interest in the position of Vice-Rector (Research)?", to the UM Recruitment Committee of Vice-Rector (Research), **Macao, China.**
- Nov 25 **2005** **7.**"Portuguese Universities in transition from Tradition to European Union Bologna's Higher-Education Framework System – University of Macau as a Case Study", **Keynote Speaker** in 2005 Sino Education Conference, National Taiwan Normal University, **Taipei, Taiwan.**
- May 24 **2005** **6.**"Universidade de Macau – Tecnologia, Gestão Eficiente e Desenvolvimento Acelerado", **Keynote Speaker** in 15th Annual Meeting Association of Portuguese Speaking Universities - AULP, Instituto Superior de Ciências Sociais e Políticas - ISCSP/TU of **Lisbon, Portugal.**
- Feb 17 **2004** **5.**"EEE Activities in Macao", in the Ceremony of Installation as the Founding Chairman of IEEE Macau Section (witnessed by IEEE President), University of Macau, **Macao, China**, and in the Annual R10 Meeting, **Adelaide, Australia**, April **2004.**
- Nov **2003** **4.**"University of Macau – Teaching, Research and Management with International Standards", **Invited Speaker** in Presidents' Forum – the Reform and Development of Contemporary Higher Education, 110th Anniversary - University of Wuhan, **Hubei, China.**
- Oct 25 **2000** **3.**"Analog Filters in Integrated Systems: CMOS Multirate Switched-Capacitor and GaAs Microwave Lumped and Tuned Transversal", **Invited Speaker** in The First Portugal-China Workshop on Solid-State Circuits, jointly-organized by IST / TU of Lisbon, UM and University of Fudan, **Shanghai, China.**

Nov	1998			2. " <u>University Development facing Globalization - Teaching and R&D in the Age of Information Technology</u> ", Invited Speaker in Symposium on Educational Reform & Development for 21 st Century Higher Education of Learning, 70 th Anniversary - University of Guangxi, Nanning, China .
Jul 27	1993			1. " <u>CMOS Multirate Switched-Capacitor Filters</u> ", Invited Seminar in the Institute of Microelectronics, University of Tsinghua, Beijing, China .

Pedagogic Activity (Teaching)

Jun	2007			Most Favorite Teacher , elected by the students of DECE / FST / UM
				Courses [21]
Oct 16	1992	Jul	2018	Department of Electrical and Computer Engineering (ECE) , Faculty of Science and Technology, University of Macau [10] Bachelor: <i>Information Technology Revolution and Electronics (New - From 2011/2012 to 2017/2018), Circuit Analysis (CA), Signals and Systems (S&S), (student evaluation - average: CA 2004/2005 - 5 e S&S 2007/2008 - 4.5 to 5, in a scale of 1 to 6), plus Telecommunication Electronics, Digital Signal Processing, System Design and Final Project (supervised 24 students between 92/93 and 99/00)</i> Master: <i>Microelectronic Circuit Design, Microelectronics for Telecommunications and Signal Processing, and Introduction to Research</i>
Oct 1	1980	Oct 15	1992	Electronics Section , DECE/IST/TU of Lisbon [11] Bachelor: <i>Applied Electronics III, Applied Electronics IV, Telecommunications and Electronics Laboratory, Electronics II (Telecommunications), Electronics III, Electronics IV, Microelectronics of Telecommunications and Final Project (supervised 2 students in 91/92)</i> Master: <i>Optimization and Modeling, Analog and Digital Filtering and Microelectronics of Telecommunications</i>

Scientific Activity (Research)

a) Funded Research Projects & State Key Lab

Oct 16	1992		Present	i) Department of ECE , Faculty of Science and Technology, University of Macau Scientific R&D Projects (31) [as Principal Investigator - PI]
Jan	2024	Dec	2024	31. Design of Integrated Power Conversion ICs with Wide Input-Voltage Range and High Power Density (Phase-I), Chair Professor Grant , funded by Research Committee of UM (500kMOP)
Jan	2023	Dec	2023	30. Microarray with flexible super-wettability contrast on digital microfluidic platforms for high-throughput nucleic acid quantification (Phase II), Chair Professor Grant , funded by Research Committee of UM (500kMOP)

Jan	2022	Dec	2022	29. <i>Microarray with flexible super-wettability contrast on digital microfluidic platforms for high-throughput nucleic acid quantification (Phase I), Chair Professor Grant</i> , funded by Research Committee of UM (500kMOP)
Jan	2021	Dec	2021	28. <i>Ultra-low Power CMOS Image Sensor with Focal-Plane Motion Detection Capability (Phase III), Chair Professor Grant</i> , funded by Research Committee of UM (350kMOP)
Jan	2020	Dec	2022	27. <i>Plan & Budget 2020-2022 / Advancing State-of-the-Art Electronics and Microsystems for Emerging Applications and Commercialization</i> , funded by FDCT (36MMOP) & MoST, China (1MRMB) - <u>State Key Lab Fund - IV</u>
Jan	2020	Dec	2020	26. <i>Ultra-low Power CMOS Image Sensor with Focal-Plane Motion Detection Capability (Phase II), Chair Professor Grant</i> , funded by Research Committee of UM (500kMOP)
Jan	2019	Dec	2019	25. <i>Ultra-low Power CMOS Image Sensor with Focal-Plane Motion Detection Capability (Phase I), Chair Professor Grant</i> , funded by Research Committee of UM (495kMOP)
Jan	2018	Dec	2018	24. <i>Ultra-Low-Voltage and Ultra-Low-Power Energy-Harvesting Radios, Chair Professor Grant</i> , funded by Research Committee of UM (500kMOP)
Jan	2017	Dec	2019	23. <i>Plan & Budget 2017-2019 / Maintaining World-level State-of-the-Art Electronics Status while Expanding Commercialization Activity</i> , funded by FDCT (30MMOP) - <u>State Key Lab Fund - III</u>
Jun	2015	Jun	2018	22. <i>Electronic-Automated Digital Microfluidics System for Disease Diagnostics</i> , funded by FDCT and Research Committee of UM (4MMOP)
Jan	2015	Jan	2017	21. <i>Giga-Hz ADC for Next Generation WiGig and WiHD Wireless Communication Systems</i> , funded by FDCT and Research Committee of UM (2.75MMOP) [Co-PI]
Jan	2015	Dec	2015	20. <i>Numerical modeling and simulation of gas embolism dynamics under ultrasound and electromagnetic fields, Chair Professor Grant</i> , funded by Research Committee of UM (255kMOP)
Jun	2014	Jun	2017	19. <i>High-Performance Wideband Data Conversion Interfaces for a Evolving Informative World</i> , funded by FDCT and Research Committee of UM (5.5MMOP) [Co-PI]
Jan	2014	Dec	2016	18. <i>Plan & Budget 2014-2016 / Consolidation and Further Integration of the Research Lines</i> , funded by FDCT (60MMOP) and Match Fund from UM - Research (40MMOP) - <u>State Key Lab Fund - II</u>
Jan	2014	Dec	2014	17. <i>Research and Development of Emerging Analog and Mixed-Signal ICs, Chair Professor Grant</i> , funded by Research Committee of UM (300kMOP)

Dec	2012	Dec	2015	16. Ultra-Low Power Solar-Powered CMOS Biomedical Implantable Sensing Chip capable of Bi-Directional Communication , funded by FDCT and Research Committee of UM (<u>3MMOP</u>) [Co-PI]
Dec	2011	Set	2015	15. Investigation on CMOS Based Digital Microfluidics , funded by FDCT (<u>3MMOP</u>) and Research Committee of UM (<u>1MMOP</u>), in collaboration with the <i>Dalian Institute of Chemical Physics of Chinese Academy of Sciences</i>
Jan	2011	Dec	2013	14. Plan & Budget 2011-2013 / Setup of Human and Technical Infrastructure of the Analog and Mixed-Signal VLSI State Key Laboratory , funded by FDCT (<u>30MMOP</u>) and Match Fund from UM - Research (<u>10MMOP</u>) – <u>State Key Lab Fund - I</u>
May	2010	Dec	2013	13. General Purpose Intelligent Adaptive Biosignal Acquisition System (Phase VI) , funded by FDCT and Research Committee UM (<u>1MMOP</u>) [Co-PI]
Dec	2009	May	2014	12. Integrated Generalized PWM Controller for DC-AC Inverter , funded by FDCT and Research Committee UM (<u>1.5MMOP</u>) [Co-PI]
Dec	2009	May	2013	11. Research and Development of Comprehensive Data Conversion Platforms in Nanometer CMOS Technology , funded by FDCT and Research Committee UM (<u>5MMOP</u>) [Co-PI]
Nov	2009	Jun	2013	10. Wireless Circuits and Systems for Mobile TV Applications in Nanoscale CMOS , funded by FDCT and Research Committee UM (<u>5MMOP</u>) [Co-PI]
Jan	2007	Dec	2008	9. Low-Voltage Multistandard-Compliant CMOS Wireless-Transceiver Analog-Baseband Platform , funded by FDCT and Research Committee UM (<u>2MMOP</u>)
Jan	2007	Dec	2008	8. High-Speed, High-Resolution, Low-Power Analog-to-Digital Conversion System with Emerging Scaled CMOS Technology , funded by FDCT and Research Committee UM (<u>2.4MMOP</u>)
Oct	2003	Aug	2007	7. Analog Baseband Microelectronics for SOC – Novel CMOS IF Data Conversion Platform for Multi-Standard Wireless Communication , funded by Research Committee UM (<u>4.8MMOP</u>) – including the financial support to create the <i>Analog and Mixed-Signal VLSI Research Lab</i> initiated in 2004.
Jan	2005	Aug	2005	6. Two-Step Channel Selection for Wireless Receiver and Transmitter Front-Ends , application to US Patent (The first in US by UM), funded by FDCT (<u>150KMOP</u>)
Oct	2003	Jun	2006	5. RF Microelectronics For SoC – Analysis and Design of the Reusable RF Platform , funded by Research Committee UM (<u>4MMOP</u>) – including updating of testing equipment from the <i>Wireless Communication Research Lab</i> concluded in 2005)

Oct	2000	Jun	2001	4. Research Laboratory establishment in Wireless Communication , funded by Research Committee UM (<u>2MMOP</u> – for the creation of the <i>Wireless Communication Research Lab</i> concluded in 2001)
Oct	1999	Jun	2001	3. Integrated Circuit Design of Low-Voltage Low-Power Multirate Analog-Digital System , funded by Research Committee UM (<u>200KMOP</u>)
Oct	1998	Jun	2000	2. MMIC Design and Testing , funded by Research Committee UM (<u>120KMOP</u>)
Nov	1993	Jun	1994	1. UMCHIP – University of Macau CHIP , funded by Research Committee UM (<u>40KMOP</u>)
Oct 1	1980	Oct 15	1992	ii) Department of Electrical and Computer Engineering , DECE/IST/TU of Lisbon R&D Projects (collaboration with companies - 4) [as Researcher]
	1990		1991	4. Integrated Circuit for Mobile Phone , for EID, Portugal
	1986		1987	3. Analog Filtering and Tone Detection for a V.32 Modem , for British Telecom, UK
	1985		1986	2. Modem of 1200 b.p.s. , for Standard Electrical, Portugal
	1982		1983	1. Modem of 300 b.p.s. , for Centrel/CAEP-ID, Portugal

b) Theses

Oct 16	1992	Present	Department of ECE , FST/UM Ph.D. Theses under Supervision (2)
Aug	2023		Mu Xuchu , Design of GaN Gate Drivers and SC Converters (Supervisor)
Aug	2022		Xiongjie Zhang , Design Techniques for Integrated Hybrid DC-DC Converters (Supervisor) Ph.D. Theses Supervised (26) [As Supervisor or Co-supervisor]
Sep	2019		26.Liang Qi , Low-Power Cascaded Delta-Sigma Modulator for Wideband Telecommunication Applications (Supervisor)
Jan	2019		25.Jiang Yang , Design of Fully Integrated Fine-Grained Switched-Capacitor DC-DC Topologies in Bulk CMOS (Supervisor)
Apr	2018		24.Zhiyuan Chen , Efficient Power Management Design for Energy Harvesting Biomedical Applications (Supervisor)
Dec	2017		23.Gengzhen Qi , SAW-Less Multiband TDD/FDD Transceiver Front-Ends Using Gain-Boosted N-path Techniques (Co-Supervisor)
Sep	2017		22.Chak-Fong Cheang , <i>Digital Correction Techniques for I/Q Mismatch, LO Feedthrough and Distortion in Wideband Transmitters</i> (Co-Supervisor)
Sep	2017		21.Wei-Han Yu , <i>Power-Efficient and Wideband WLAN Transmitter Techniques in Nanoscale CMOS</i> (Co-Supervisor)

Sep	2016	20.Ka-Meng Lei , <i>Handheld CMOS-Based NMR Devices for Biological/Chemical Diagnosis</i> (Co-Supervisor)
Mar	2016	19.Chio-In Jeong , <i>Low-Power CMOS Processors Design for ECG QRS Wave Detection and Data Compression</i> (Co-Supervisor)
Oct	2015	18.Jie Gao , <i>Electronic-Automated Intelligent Digital Microfluidic System and Its Applications to DNA Amplification</i> (Supervisor)
Mar	2015	17.Yaohua Zhao , <i>Low-Power High-Linearity and Area-Efficient Switched-Capacitor Filters Design Techniques in Nanoscale CMOS</i> (Supervisor)
Mar	2015	16.Tawfiq Amin , <i>Analysis and Design of Power-Efficient Voltage-Controlled Oscillators for Wireless Applications in Nanoscale CMOS</i> (Supervisor)
Jul	2014	15.Zushu Yan , <i>Systematic Design and Implementation of Single-Stage and Multi-Stage CMOS Amplifiers</i> (Supervisor)
Jul	2014	14.Zhicheng Lin , <i>Ultra-Low-Power and Ultra-Low-Cost Short-Range Wireless Receivers in Nanoscale CMOS</i> (Supervisor)
Jul	2014	13.Fujian Lin , <i>Advanced Circuit Design Techniques for Low-Power Wideband Wireless Receivers in Nanoscale CMOS</i> (Supervisor)
Jul	2014	12.Ka-Fai Un , <i>New Architectures and Circuit Design Techniques for TV-Band White-Space Wireless Transmitters</i> (Supervisor)
Mar	2012	11.U-Fat Chio , <i>Design Techniques for Low-Power High-Speed Analog-to-Digital Converters using Binary-Search and Subranging Schemes</i> (Co-Supervisor)
Jul	2011	10.Zhu Yan , <i>Circuit Techniques for High-Performance SAR-Type ADCs</i> (Co-Supervisor)
Jul	2011	9.He-Gong Wei , <i>Design of High-Speed Power/Area Optimized Multi-Bit/Cycle SAR ADC</i> (Co-Supervisor)
Jul	2008	8.Sai-Weng Sin , <i>Generalized Low-Voltage Circuit Design Techniques for Very High-Speed Time-Interleaved Pipelined ADC</i> (Supervisor)
Jul	2008	7.Sio-Weng Ting , <i>Multiple-Bandgap Defected Ground Structure and its Applications to Highly Selective Microwave Bandpass Filters</i> (Co-Supervisor)
Jun	2008	6.Wai-Wa Choi , <i>Microwave Miniaturization Techniques and their Applications to Quasi-Elliptic Bandpass Filters</i> (Supervisor)
Jul	2006	5.Pui-In Mak , <i>Multistandard-Compliant and Low-Voltage Analog-Baseband Techniques for Wireless Communication Systems</i> (Supervisor)
Jul	2002	4.Vai Mang I , <i>Detecting ECG Late Potentials using Wavelet Transform</i> (Co-Supervisor)
Jun	2002	3.Seng-Pan U , <i>Multirate Switched-Capacitor Interpolation Techniques for Very-High Frequency Analog Front-End Filtering</i> (Supervisor)
		<u>[Double Degree FST/UM-IST/TU Lx]</u>

Apr	2001	2.Cheong Ngai , <i>Interactive Compiler for Automated Design of IIR SC Multistage Decimators</i> (Supervisor)
Jul	2000	1.Kam-Weng Tam , <i>MMIC Lumped and Transversal Active Bandpass Filter</i> (Co-Supervisor) [<u>Double Degree FST/UM-IST/TU Lx</u>]
		M.Sc. Theses Supervised (21) [As Supervisor or Co-supervisor]
Dec	2014	21.Li Yue , <i>Joint-Digital-Predistortion for Wireless Transmitter's I/Q Imbalance and PA Nonlinearities using an Asymmetrical Complexity Reduced Volterra Series Model</i> (Co-Supervisor)
Jul	2014	20.Peng Xingqiang , <i>Advanced Circuit Techniques for Class-D Power Amplifiers in Nanoscale CMOS</i> (Co-Supervisor)
Jun	2014	19.Wang Wei , <i>Systematic Analysis and Design of Area-Efficient Frequency Compensation Techniques for Micropower Two-Stage CMOS Amplifiers</i> (Co-Supervisor)
Aug	2013	18.Chen Zhiyuan , <i>Single-Chip Solar Energy Harvesting IC with Integrated Solar Cells for Biomedical Application</i> (Supervisor)
Dec	2012	17.Weng-Fai Cheng , <i>A Wideband Balun Low-Noise Amplifier and Digital Impairment Correction Techniques for Wireless Transmitters</i> (Co-Supervisor)
Dec	2012	16.Yan-Jie Xiao , <i>Capacitance-to-Digital Converter for Lab-on-Chip Digital Microfluidics System & an Ultra-low Power SAR ADC with Effective Calibration</i> (Co-Supervisor)
Jul	2012	15.Wei-Han Yu , <i>Digital Pre-distortion and Calibration Techniques for Wireless Transmitters</i> (Co-Supervisor)
Jun	2011	14.Liu Miao , <i>High-Voltage-Enabled Operational Amplifier and Active-Decoupling Technique for Wideband Balun-LNA</i> (Co-Supervisor)
Apr	2010	13.Keng-Wai Lo , <i>Wideband Active-Balun Variable-Gain Low-Noise Amplifier for Mobile-TV Applications</i> (Co-Supervisor)
Jul	2009	12.Ka-Fai Un , <i>Nanoscale CMOS Circuits for Wireless Applications: CT/DT Channel Selection Filter & Open-Loop Multi-Phase Local-Oscillator Generators</i> (Supervisor)
Aug	2008	11.He-Gong Wei , <i>Design of High-Speed Analog-to-Digital Converter with High Accuracy Power Switchable Track-and-Hold</i> (Co-Supervisor)
Jul	2008	10.Yan Zhu , <i>Comprehensive Linearity Analysis of High-Speed Power-Efficient Successive-Approximation ADCs with Series Capacitive DAC Structure</i> (Co-Supervisor)
Aug	2007	9.Weng-Ieng Mok , <i>New Architecture for Pipeline/Two-Step ADC</i> (Co-Supervisor)
Aug	2007	8.Ka-Hou Ao Ieong , <i>Low-Voltage Analog Baseband Circuitry for IEEE 802.11a WLAN Transceiver</i> (Co-Supervisor)

Jul	2007	7.Kin-Sang Chio , <i>A Robust Low-Distortion Sigma-Delta Modulator for Dual-Mode RF Receivers</i> (Co-Supervisor)
Jul	2007	6.Ngai Kong , <i>Reconfigurable Switched-Current Fuzzy Logic Controller</i> (Co-Supervisor)
Jun	2006	5.Ma Jun Xia , <i>Design of Power Efficient Flash-Interpolation Type ADC for UWB Applications</i> (Co-Supervisor)
Sep	2003	4.Sai-Weng Sin , <i>Timing-Jitter Effects in Time-Interleaved Sampled-Data Systems – Generalized Noise Analysis & Mismatch-Insensitive Clock Generation</i> (Co-Supervisor)
Dec	2002	3.Lou Fan , <i>Mismatch-Insensitive N-Path Multirate SC Sigma-Delta Modulator for High-Frequency Applications</i> (Supervisor)
Mar	1999	2.Lou Weng Tim , <i>CMOS Programmable Pulse and Multiphase Clock Generator</i> (Supervisor)
Jul	1997	1.Seng-Pan U , <i>Impulse Sampled Switched-Capacitor Sampling Rate Converters</i> (Supervisor)

Graduated Ph.D. Students (current appointments) [26]

2019	Liang Qi , Assistant Professor in the <i>Shanghai Jiao Tong University</i> , Shanghai, China.
2019	Jiang Yang , Assistant Professor in the <i>State Key Lab of Analog and Mixed-Signal VLSI-IME</i> , UM, Macao.
2018	Zhiyuan Chen , Associate Professor in the <i>Fudan University</i> , Shanghai, China.
2017	Gengzhen Qi , Associate Professor in the <i>Sun Yat-Sen University</i> , Guangzhou, China.
2017	Chak-Fong Cheang , <i>Senior Engineer @ Mediatek</i> , Taiwan.
2017	Wei-Han Yu , Assistant Professor in the <i>State Key Lab of Analog and Mixed-Signal VLSI-IME</i> , UM, Macao [before, <i>Macao Fellow</i> in Stanford University, USA].
2016	Ka-Meng Lei , Assistant Professor in the <i>State Key Lab of Analog and Mixed-Signal VLSI-IME</i> , UM, Macao [before, <i>Macao Fellow</i> in Harvard University, USA].
2016	Chio-In Ieong , <i>Design Engineer @ Hisilicon (Huawei)</i> , Shenzhen, China.
2015	Jie Gao , <i>Senior Administrative Officer, Clean Room (Microfluidics Chips), Biomedical Research Line</i> in the <i>SKLAB-AMSVLSI</i> , DEEE/FST/UM.
2015	Tawfiq Amin , <i>Assistant Professor @ Military Institute of Science & Technology (MIST)</i> , Dhaka, Bangladesh.
2015	Yaohua Zhao , <i>Design Engineer @ Mediatek</i> , Singapore.
2014	Zushu Yan , <i>Senior Design Engineer @ Marvell</i> , San Clara, California [before @ <i>Qualcomm</i> , San Diego, California, USA].
2014	Zhicheng Lin , <i>Senior Design Engineer @ Marvell</i> , San Clara, California [before @ <i>Qualcomm</i> , San Diego, California, USA].
2014	Fujian Lin , <i>Design Engineer @ Mediatek</i> , Singapore.

2014	Ka-Fai Un , Assistant Professor in the State Key Lab of Analog and Mixed-Signal VLSI-IME, UM, Macao [before, Macao Fellow in University College Dublin, Ireland].
2012	U-Fat Chio , Associate Professor in Chongqin University, Chongqin, China.
2011	He-Gong Wei , Design Engineer @ Silicon Labs, LA, California, USA, former Post-Doc in the Communication Circuits Laboratory, Electrical Engineering Department, University of California Los Angeles (UCLA), USA.
2011	Yan Zhu , Associate Professor in the State Key Lab of Analog and Mixed-Signal VLSI & Part-time Consultant @ Hisilicon (Huawei), UM, Macao & Shenzhen, China.
2008	Wai-Wa Choi , Associate Professor, Wireless Communication Lab, DECE/FST/UM, Macao.
2008	Sio-Weng Ting , Assistant Professor, Wireless Communication Lab, DECE/FST/UM, Macao.
2008	Sai-Weng Sin , Associate Professor, Sub-Director IME, Academic Coordinator & Coordinator of the Data Conversion & Signal Processing Research Line in the State Key Lab of Analog and Mixed-Signal VLSI, DECE/FST/UM, Macao, Senior Member of IEEE, Macao.
2006	Pui-In Mak , Full Professor, Director of the State Key Lab of Analog and Mixed-Signal VLSI, Sub-Director IME & Coordinator of the Wireless Research Line, DECE/FST/UM, IEEE Fellow , IET Fellow (UK), RSC Fellow (UK), Foreign Member of the Academy of Sciences of Lisbon, Portugal, IEEE Distinguished Lecturer from IEEE CASS & SSCS, Macao.
2002	Vai Mang I , Associate Professor and former Head of Department of DECE/FST/UM. Former Chairman of IEEE Macau Section, Senior Member of IEEE, Macao.
2002	Seng-Pan U , CEO Silergy (former Akrostar, Synopsys & Chipidea-Macao), IEEE Fellow , Macao.
2001	Cheong Ngai , Associate Professor in Macao Polytechnic University and Assistant Coordinator of the Computer Studies Program, Macao.
2000	Kam-Weng Tam , Full-Professor and Coordinator of the Wireless Communication Lab, Associate Dean of FST/UM and former Head of Department of DECE/FST/UM, IET Fellow and Senior Member of IEEE, Macao.

Service (Representing UM or Public in Macao)

Sep 17	2021	Present	Vice-President of the Association of Portuguese Speaking Universities - AULP , representing the Rector of UM.
Sep 17	2021		Honorary Member of AULP.
Sep 28	2020	Present	Member of the Consultative Committee , Cultural & Scientific Center of Macao (CCCM), <i>Pro Bono</i> , Lisbon, Portugal.

Jan 1	2017	Aug	2020	Chairman of the Special Committee about Technology Mediation and Cooperation Industry-University-Research of the Council of Science and Technology , nominated by the Chief Executive of Macao SAR Government.
Aug 8	2016	Aug	2020	Member of the Council of Science and Technology , nominated by the Chief Executive of Macao SAR Government.
Jul 5	2016	Present		Member of the Consultative Committee , Jorge Álvares Foundation, <i>Pro Bono</i> , Lisbon, Portugal.
Aug 19	2015	Present		President of the Council of Architecture, Engineering and Urbanism , nominated by the Chief Executive of Macao SAR Government [<u>Government Body that certifies the qualifications and supervises training and final examinations of Architects, Engineers and Urbanists in Macao</u>].
Sep 19	2014	July 12	2017	President of the Association of Portuguese Speaking Universities - AULP , representing the Rector of UM.
Sep 1	2012	Jan 31	2018	Director of the European Union Academic Program – EUAP Macau , representing UM.
Jan 1	2011	Dec	2015	Coordinator of 21 courses in UM for the Secretariat of the Forum of Economic Cooperation between China, Macao and the Portuguese Speaking Countries .
Mar 1	2010	Present		Member of the Board (2010-2020) & President of the Fiscal Council (2020-2022) of the International Institute of Macao – IIM , <i>Pro Bono</i> , Macao.
Jan 1	2009	Mar 31	2019	Chair of the Executive Committee – UMTEC (Technology Company owned by UM) , representing UM.
Sep 1	2007	Aug 31	2012	Executive Director of the <i>Jean Monnet Chair on European Union Law - Facing the Constitutional and Governance Challenges in the Era of Globalization</i> , in the Faculty of Law.
Sep 1	2005	Sep 19	2014	Vice-President of the Association of Portuguese Speaking Universities - AULP , representing the Rector of UM.
Sep 1	1997	Present		Scientific and Management Activity in IEEM Member of the Board of Directors of the Institute of European Studies of Macao – IEEM , between January and October of 2002, representing UM. President of the Scientific Council of the Master in European Studies (97/06). President of the General Assembly , representing UM (2008-Present).
Sep 1	1997	Dec 12	2018	President (or VP) of the General Assembly of the Institute for the Development and Quality – IDQ-Macau , representing UM.
Mar 1	1996	Dec 31	2012	Management Activity in INESC-Macau Member (96/97) and President of the Board of Directors (97/03), VP of the General Assembly , representing UM (2008-2012).
Sep 1	2001	Mar 31	2003	Member of the Council for Science and Technology , as President of INESC-Macau, nominated by Macao SAR Government (Chinese Administration).

Apr	2001	Sep	2002	Co-founder of Chipidea Microelectronics (Macao) [later Synopsys and now Akrostar] representing UM in the elaboration of the Cooperation Protocol – UM / Chipidea Microelectronics that led to the creation of a Design Center of the company in Macao.
Oct 7	1998	Jan 31	2000	Member of the Consultative Council of the Y2K , as President of INESC-Macao, nominated by Macao SAR Government (Chinese Administration) [created the "Macao Y2K Center"].
Jan 1	1998	Dec 19	1999	Member of the Consultative Council for Science, Technology and Innovation , as President of INESC-Macao, nominated by Macao Government (Portuguese Administration).
Oct 1	1993	Aug 31	2000	Member of the Commission for the Recognition of Academic Degrees , nominated by Macao Government and working with GAES (Portuguese Administration).

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13. Ka-Fai Un, Pui-In Mak, Man-Kay Law, R. P. Martins, "Wireless Transmitter", **US Patent, No. 9,037,100**, May 2015.
12. Zushu Yan, Pui-In Mak, Man-Kay Law, R. P. Martins, "Frequency Compensation Techniques for Low-Power and Small-Area Multistage Amplifiers", **US Patent, No. 8,963,639**, February 2015.
11. Yan Zhu, Chi-Hang Chan, Sai-Weng Sin, Seng-Pan U, R. P. Martins, "Sampling front-end for analog to digital converter", **US Patent, No. 8,947,283**, February 2015.
10. Chi-Hang Chan, Yan Zhu, U-Fat Chio, Sai-Weng Sin, Seng-Pan U, R. P. Martins, "Comparator and Calibration Thereof", **US Patent, No. 8,829,942**, September 2014.
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3. Pui-In Mak, Seng-Pan U, R. P. Martins, "Two-Step Channel Selection for Wireless Transmitter Front-Ends", **US Patent, No. 8,019,290**, September **2011**. [Cited in 5 US patents from Texas Instruments Inc., 2 x Qualcomm Inc., Applied Signal Technology, Inc., Raytheon Applied Signal Technology, Inc.]
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