

Parte A. DATOS PERSONALES		Fecha del CVA	01/11/2025
Nombre y apellidos	Eduardo Alarcón Cot		
DNI/NIE/pasaporte	----	Edad	---
Núm. identificación del investigador	Researcher ID		
	Código Orcid		

A.1. Situación profesional actual

Organismo	Universitat Politècnica de Catalunya		
Dpto./Centro	Ingeniería Electrónica / Escuela Técnica Superior de Ingeniería de Telecomunicación de Barcelona (ETSETB)		
Dirección	---		
Teléfono	---	correo electrónico	---
Categoría profesional	Catedrático de Universidad	Fecha inicio	06/2022
Espec. cód. UNESCO	330700 - Tecnología electrónica		
Palabras clave	Chip architectures, communication networks, Quantum computing		

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Doctor Ingeniero de Telecomunicación	Universitat Politècnica de Catalunya	2000
Ingeniero de Telecomunicación	Universitat Politècnica de Catalunya	1995

A.3. Indicadores generales de calidad de la producción científica (véanse instrucciones)

- **19** tesis doctorales dirigidas -actualmente dirigiendo a 7 doctorandos becados-
- Publicaciones totales: **423** (UPC futur)
 - **124** revistas
 - **299** Conferencias
 - 5 libros, 5 capítulos de libro
 - **1** patente (US Patent Office), 5 patentes Europeas, 2 patentes españolas
- 4 sexenios, el último 1/1/2022

	Google Scholar
Publicaciones Reconocidas	472
Citas totales	11542
Promedio citas 5 años/año	1000
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Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Prof. Eduard Alarcón received the M. Sc. (National award) and Ph.D. degrees (honors) in Electrical Engineering from the Technical University of Catalunya (UPC BarcelonaTech), Spain, in 1995 and 2000, respectively. Since 1995 he has been with the Department of Electronics Engineering at the School of Telecommunications at UPC, where he became Associate Professor in 2000. From August 2003 to January 2004, July-August 2006 and July-August 2010 he was a Visiting Professor at the CoPEC center, University of Colorado at Boulder, US, and during January-June 2011 he was Visiting Professor at the School of ICT/Integrated Devices and Circuits, Royal Institute of Technology (KTH), Stockholm, Sweden. During the period 2006-2009 he was Associate Dean of International Affairs at the School of Telecommunications Engineering, UPC. He was in 2018-2019 Senior advisor at General Directorate R+D+i, Ministry of Minister of Science, Innovation and Universities. ICREA Academia Award by the Generalitat de Catalunya 2019-2024. He is founding member of the strategy group and ambassador of The Collider entrepreneurship program at the Mobile Word Capital. He has co-authored more than 400 scientific publications, 6 books, 8 book chapters and 12 patents, (including co-authorship with colleagues at MIT -2 research groups-, UC Berkeley, Google, Samsung, Intel, Univ. Cambridge, GeorgiaTech, CU Boulder, KTH, ETH Zurich, Aalto, TU Delft, Univ. Toronto, NXP, UC Dublin, Teheran Univ Science and Technology Iran, Univ. Perth Australia, RTW Aachen, EPFL, and IBM Zurich). He has been involved in different National, European

(H2020 FET-Open, Flag-ERA, ESA) and US (DARPA, NSF, NASA) R&D projects within his research interests including the areas of on-chip energy management and RF circuits, energy harvesting and wireless energy transfer, nanosatellites and satellite architectures for Earth Observation, nanotechnology-enabled wireless communications and Artificial Intelligence chip architectures. He has received the GOOGLE Faculty Research Award (2013), SAMSUNG Advanced Institute of Technology Global Research Program gift (2012), and INTEL Doctoral Student Honor Programme Fellowship (2014). He has given 35 invited, keynote and plenary lectures and tutorials across all continents, including invited lectures at Massachusetts Institute of Technology, Intel Massachusetts, University of Cambridge, IBM TJ Watson NY, Indian Institute of Technology Karagphur, Cadence Santa Clara, MIET Moscow, U. Auckland, New Zealand, U. Shiraz, Iran, and Samsung Advanced Institute of Technology in Seoul was appointed by the IEEE CAS society as distinguished lecturer for 2009-2010 and lectures yearly MEAD courses at EPFL. He has participated in 15 debate panels including at IBM TJ Watson Yorkwotn Heights New York, Cambridge University, EPFL. Professional officer responsibilities include elected member of the IEEE CAS Board of Governors (2010-2013), member of the IEEE CAS long term strategy committee, Vice President Finance of IEEE CAS (2015) and Vice President for Technical Activities of IEEE CAS (2016-2017, and 2017-2018). He was recipient of the Myril B. Reed Best Paper Award at the 1998 IEEE Midwest Symposium on Circuits and Systems. He was the invited co-editor of a special issue of the Analog Integrated Circuits and Signal Processing journal devoted to current-mode circuit techniques, a special issue of the International Journal on Circuit Theory and Applications, invited associate editor for a IEEE TPELS special issue on PwrSOC. He co-organized special sessions related to on-chip power management at IEEE ISCAS03, IEEE ISCAS06 and NOLTA 2012, and lectured tutorials at IEEE ISCAS09, ESSCIRC 2011, IEEE VLSI-DAT 2012 and APCCAS 2012. He was the 2007 Chair of the IEEE Circuits and Systems Society Technical Committee on Power Circuits. He was acting as general co-chair of DCIS 2017, Barcelona, the Federated Satellite Systems 2020 workshop, and IEEE CAS flagship IEEE ISCAS 2020, Seville. He was the technical program co-chair of the 2007 European Conference on Circuit Theory and Design - ECCTD07 and of LASCAS 2013, Special Sessions co-chair at IEEE ISCAS 2013. He served as an Associate Editor of the IEEE Transactions on Circuits and Systems - II: Express briefs (2006-2007) and Associate Editor of the Transactions on Circuits and Systems – I: Regular papers (2006-2012) and currently serves as Associate Editor Elsevier's Nano Communication Networks journal (2009-), Journal of Low Power Electronics (JOLPE) (2011-) and in the Senior founding Editorial Board of the IEEE Journal on Emerging topics in Circuits and Systems, of which he is currently Editor-in-Chief (2018). He has supervised 17 PhD thesis completed, 4 on-going PhD students, 80 MSc's thesis students completed and 10 Intl visiting scholars. His publications have more than 9225 citations and an h-index of 48 and i10 of 164 according to Google Scholar (highest number citations for a paper: 481). In Academia, activities related to innovation in higher education include General co-chair of the 2014 CDIO Barcelona International Conference and organizing committee of the 2013 CDIO International conference hosted at MIT and Harvard.

Parte C. MÉRITOS MÁS RELEVANTES *(ordenados por tipología)*

C.1. Publicaciones Seleccionadas [*Entre paréntesis citas según Google Scholar*]

[512] I Llatser, C Kremers, A Cabellos-Aparicio, JM Jornet, E Alarcón, et al. "Graphene-based nano-patch antenna for terahertz radiation", Photonics and Nanostructures-Fundamentals and Applications 10 (4), 353-358 (con colegas Northeastern Boston)

[495] H Peng, A Prodic, E Alarcón, D Maksimovic, "Modeling of quantization effects in digitally controlled dc-dc converters", IEEE Transactions on power electronics 22(1), 208-15. (con colegas U.Colorado Boulder)

[457] Albert Mestres, Alberto Rodriguez-Natal, Josep Carner, Pere Barlet-Ros, Eduard Alarcón, Marc Solé, Victor Muntés, David Meyer, Sharon Barkai, Mike J Hibbett, Giovanni Estrada, Florin Coras, Vina Ermagan, Hugo Latapie, Chris Cassar, John Evans, Fabio Maino, Jean Walrand, Albert Cabellos; "Knowledge-Defined Networking," ACM communications 2020, (co- authored by UC Berkeley, Cisco Systems, HPE, NTT, Brocade, Intel and CA Technologies)

[300] A Cabellos-Aparicio, I Llatser, E Alarcon, A Hsu, T Palacios, "Use of terahertz photoconductive sources to characterize tunable graphene RF plasmonic antennas," IEEE Transactions on Nanotechnology 14 (2), 390-396 (co- authored by Massachusetts Institute of Technology)

C.2. Contratos I+D

Título: "**Android Beyond the Stratosphere: phone based nanosatellites**"

Investigador principal (nombre y apellidos): Eduard Alarcón and Adriano Camps

Entidad financiadora: **Google** Faculty Research Award (US)

Duración (fecha inicio - fecha fin, en formato DD/MM/AAAA): 01/01/2013-01/01/2014

Financiación recibida (en euros): 100.000 US\$

Estado del proyecto o contrato: concedido

C.3. Proyectos (MCYT/ EU / NSF)

Título: "**QUADRATURE**", **SCALABLE MULTI-CHIP QUANTUM ARCHITECTURES ENABLED BY CRYOGENIC WIRELESS/QUANTUM- COHERENT NETWORK-IN-PACKAGE "**

Investigador principal (nombre y apellidos): Eduard Alarcón

Entidad financiadora: **EiC Pathfinder, EU**

Duración (fecha inicio - fecha fin, en formato DD/MM/AAAA): 01/01/2013-01/01/2014

Financiación recibida (en euros): 4.2 MEu

Estado del proyecto o contrato: concedido

Referencia: Component 17th, Resiliency Funds- Comunicaciones cuánticas, acciones complementarias

Título: Quantum on-chip communication networks for scalable quantum computer architectures",

IP y entidad de afiliación: Eduard Alarcón

Entidad financiadora y convocatoria: MCINN

Fecha inicio y finalización: 1/1/2015 – 30/06/2017

Cuantía de subvención: 172.000€

Referencia: H2020-665564-CIRCLE

Título: Coordinating European Research on Molecular Communications (CIRCLE)

IP y entidad de afiliación: Eduard Alarcón and Josep Solé-Pareta (UPC)

Entidad financiadora y convocatoria: Comisión europea, FET-OPEN CSA

Fecha inicio y finalización: 1/1/2015 – 30/06/2017

Cuantía de subvención: 90.000€

Referencia: H2020-687490-ONION

Título: Operational Network of Individual Observation Nodes (**ONION**)

IP y entidad de afiliación: Eduard Alarcón and Adriano Camps (UPC)

Entidad financiadora y convocatoria: Comisión europea, H2020 – Space – Earth Observation

Fecha inicio y finalización: 1/1/2016 – 31/12/2017

Cuantía de subvención: 250.000€

Referencia: Consolider-RUE

Título: Advanced Wide Band Gap Semiconductor Devices for Rational Use of Energy (RUE)

IP y entidad de afiliación: Alberto Poveda (UPC)

Entidad financiadora y convocatoria: MINECO CONSOLIDER-INGENIO 2010

Fecha inicio y finalización: 1/1/2010 – 1/1/2014

Cuantía de subvención: 280.000€

Additionally: 5 PI in MCYT national projects, Researcher in research projects with NSF, DARPA, NASA, National Semiconductor, TI

C.4. Estancias de Investigación

2011 [MCYT-funded] **Invited professor at KTH- Royal Institute of Technology** (Stockholm, Sweden), Dates: January-July 2011, Topic: Graphene Transistors and on-chip energy harvesting

2004 [MCYT-funded] **Invited professor at University of Colorado at Boulder (USA)**, Dates: August 2004 January 2005, Topic: on-chip energy processing

C.5. Charlas Invitadas

- **Keynote talk**, “Prospects for Energy harvesting”, the 24th Iranian Conference on Electrical Engineering (ICEE 2016), Shiraz, Iran, May 10-1212, May 2016.
- Invited talk, " Energy harvesting: device, circuit and system co-design and on-chip integration ". Chiba University, Tokyo, Japan. June 2014
- **Invited talk**, "Wireless Power Transfer: Fueling the Dots". University of Auckland, Auckland, New Zealand. May 2014.
- **Invited talk**, “Energy harvesting: device, circuit and system co-design and on-chip integration”, University of Freiburg – IMTEK, Germany, March 2013.
- **Invited talk**, “Towards nanotechnology-based energy-harvesting-enabled Internet of Things”, February 2013, Northeastern University, Boston, Massachusetts, USA
- **Tutorial** at the 2012 Asia Pacific Conference on Circuits and Systems (2012 APCCAS), "Energy harvesting: device, circuit and system co-design and on-chip integration", Kaoshung, Taiwan, October 2012.
- **Invited talk**, “Towards nanotechnology-based energy-harvesting-enabled Internet of Things”, Oct 30th 2012, Moscow Institute of Electronic Technology, MIET, Zelenograd, Moscow, Russia
- **Invited lecture**, “Switching Converter Topologies and Control Methods for Wideband Efficient On-chip Power Management”, LEES Colloquium, Department of Electrical Engineering and Computer Science, MIT, Cambridge, MA, USA, Nov 6th 2008.
- **Seminar**, “System-Level and IC Implementation Techniques for Power Management in Battery- Powered Portable Electronics,” Dragan Maksimovic and Eduard Alarcón, MEAD course in Power Management, at University of Santa Cruz, CA, USA in March and Ecole Polytechnique Federale de Lausanne, in September, 2005- to date (yearly)
- **Invited plenary lecture**, “Power consumption management in portable applications”, ICED 2006, 2nd International conference on electronic design, Veracruz, Mexico, November 2006.
- **Invited tutorial**, “Powering ICs: Trends in on-chip switching power regulators”, invited tutorial, Indian Institute of Technology, Kharagpur, India, Dec. 23, 2005

C.6. Actividad Profesional

- **Vice President for Technical Activities**, IEEE Circuits and Systems Society (2016) –following David Skellern, NICTA, Australia)-
- **Vice President for Finances**, IEEE Circuits and Systems Society (2015) –following Mario di Bernardo, Univ. Bristol, UK)-
- **Elected member of the Board of Governors**, IEEE Circuits and Systems Society (2010–2014)
- **IEEE Distinguished lecturer**, IEEE Circuits and Systems Society (2009–2010) (lectures in Santa Clara, US, Kuala Lumpur, Malaysia, and Lima/Puno, Peru)
- **Member of the IEEE CAS Society Long Term Strategy (vision) Committee (2010-2012)** (meetings in Taipei, Paris, San Diego, Vancouver) Vojin G. Oklobdzija Eduard Alarcon, Mario di Bernardo, Enrico Macii, *et al.*
- **Deputy Editor-in-Chief (2016)**, IEEE Journal on Emergent Topics in Circuits and Systems, JETCAS with Editor-in-Chief: YenKuang Chen, Intel Corporation Santa Clara, CA, USA.
- **Invited Associate Editor (2016)** of the IEEE Transactions of Circuits and Systems II, Special issue on "Late Breaking news in CAS", Guest co-editors: Alyssa Apsel, Cornell University, US, Eduard Alarcon, UPC, Spain, Chai Wah Wu, IBM T. J. Watson Research Center, NY, US.
- **Associate Editor**, IEEE Transactions on Circuits and Systems—I: Regular papers (2006–to date)