Curriculum Vitae *October 10, 2026*

Josep M. Guerrero, Ph.D., IEEE Fellow, CSEE Fellow



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Executive Summary

Professor Josep M. Guerrero is the pioneering architect of the foundational control paradigm for the global energy transition. His invention of the hierarchical control framework—the universal "operating system" for grid-forming inverters and microgrids—has transformed renewable energy integration from a theoretical challenge into a practical, standardized global reality. His work, codified into key international IEEE standards (2030.7, 2030.8) and adopted by industry leaders worldwide, underpins the stable integration of hundreds of gigawatts of renewable capacity. Recognized with an unprecedented "IEEE Triple Crown" of society awards and as a Clarivate Highly Cited Researcher for nine consecutive years (2014-2022), he is consistently ranked among the world's top 0.1% of scientists. His career exemplifies the translation of breakthrough scientific insight into real-world infrastructure, bridging groundbreaking academic research with widespread industrial adoption to benefit power systems from terrestrial smart grids to aerospace applications on a global scale.

Keywords

Microgrids; Renewable Energy Systems; Neuroscience-based Artificial Intelligence; Digital twins; Cybersecurity

Education and Qualifications

- 2023 — M.Sc. in Sleep: Physiology and Medicine, University of Murcia, Spain
- 2022 — M.Sc. in Psychobiology and Cognitive Neuroscience, Autonomous University of Barcelona, Spain
- 2015 — Executive Education Program, Harvard Business School, USA
- 2003 — Ph.D. in Power Electronics
  Technical University of Catalonia (UPC – BarcelonaTech), Spain
- 2000 — M.Sc. in Electronic Engineering
  Technical University of Catalonia (UPC – BarcelonaTech), Spain
- 1997 — B.Sc. in Telecommunications Engineering
  Technical University of Catalonia (UPC – BarcelonaTech), Spain

Professional Positions

- Jul 2026 – Present — Distinguished Professor
  University of Johannesburg, South Africa
- Jan 2025 – Present — Co-founder & Chief Scientific Advisor
  VerdaGrid (Shaoxing) Intelligent Technology Co., Ltd. | Zhuji, China
- Jan 2025 – Present — Distinguished Senior Researcher
  University of Valladolid, Spain
- Dec 2024 – Present — Director, Center for Research on Microgrids (CROM)
  Huanjiang Laboratory, China
- Aug 2019 – Oct 2023 —Director, Center for Research on Microgrids (CROM)
  AAU Energy, Aalborg University, Denmark
- *Sep 2008 – July 2011 — Associate Professor*
  BarcelonaTech (UPC), Barcelona, Spain

- Sep 2004 – Aug 2008 — Lecturer
  BarcelonaTech (UPC), Barcelona, Spain
- Feb 1999 – Aug 2004 — Assistant Professor
  BarcelonaTech (UPC), Barcelona, Spain

Guest and Visiting Professorships

- 2014-2016 Chair professor, Shandong University, China
- 2012-present Chair professor, Institute of Electrical Eng., Chinese Academy of Sciences
- 2012-present Chair professor, Nanjing University of Aeronautics and Astronautics, China
- 2015-present Chair professor, Hunan University, China
- 2016-present Visiting Professor, Aston University, UK

Advisory Panels

- 2022–now Member of the Scientific Advisory Council of GADEA Foundation, Spain
- 2022 – Advisory board for the State Key Laboratory of Internet of Things for Smart City, University of Macau
- 2021 – ERC Synergy Grant Review Panel, European Research Council
- 2016 – ERC Starting Grant Review Panel, European Research Council

Participation on Committee Boards and Organizations

- +20 keynote speeches in international conferences (last 5 years), e.g., speaker in the "IEEE Webinar on Authorship and Open Access" (2022) +1200 attendees
- +10 tutorials at the most important conferences
- +50 invited presentations in European, Asian, and USA universities.

Editorial Activities

- Associate Editor: IEEE Transactions on Power Electronics (2009-2021)
- Associate Editor: IEEE Industrial Electronics Magazine (2010-present)
- Associate Editor: IEEE Transactions on Industrial Electronics (2004-2014)
- Associate Editor: IEEE Transactions on Journal of Emerging and Selected Topics in Power Electronics (2017-2021)
- Senior Editor: IEEE Systems Journal (2021-2022)

Awards and Honors

- **2026:** IEEE IES Dr.-Ing. Eugene Mittelmann Outstanding Research Achievement Award
- **2026:** Fellow of the Chinese Society for Electrical Engineering (CSEE Fellow)
- **2025:** Zhejiang Foreign Expert West Lake Friendship Award
- **2023:** IEEE Modeling and Control Technical Achievement Award
- **2022:** IEEE PES Douglas M. Staszesky Distribution Automation Award
- **2021:** IEEE Bimal Bose Award for Industrial Electronics Applications in Energy Systems
- **2021:** Fellow of the Danish Academy of Technical Sciences (ATV)
- **2015:** IEEE Fellow
- **2014 – 2022:** Clarivate Highly Cited Researcher (9 consecutive years)

Scientific Publications & Impact Metrics

- Peer-reviewed Journal Papers (Author): 1,217
- Review/Survey Articles: 60
- Books: 13
- Book Chapters: 41
- Peer-reviewed Conference Papers: 541
- International Patents: 1
- Google Scholar Citations: 151,867; h-index: 177
- Scopus Citations: 122,456; h-index: 158
- Web of Science Citations: 87,560 (excluding self-citations); h-index: 135

Supervision

- 42 Ph.D. students graduated
- +100 international exchange researchers