

CURRICULUM VITAE

of

Mario Porru

Mario Porru got the BSc and MSc in Electrical Engineering in 2009 and 2011 respectively at the University of Cagliari, Italy. Then he got his PhD in Electronic and Computer Engineering in April 2015 at the same university with a dissertation entitled "Management and Control of Energy Storage System for Stationary and Automotive Applications". Mario Porru was a Postdoctoral Researcher at the University of Cagliari from April 2015 to April 2018. From March 2019 to July 2019 he was a Visiting Researcher at the FEMTO-ST Lab / University of Technology of Belfort and Montbéliard. Mario Porru is a co-founder of the spin-off company NEPSY, which was founded in June 2017 to develop, design and commercialise novel electric propulsion systems.

Mario Porru has been an Assistant Professor at the Department of Electrical and Electronic Engineering of the University of Cagliari since April 2018. He currently teaches Electric Vehicles within the master's degrees in Electrical Engineering and Energy Engineering. His research activity is mainly focused on developing management and control strategies of energy storage systems and hybrid energy storage systems for vehicular and stationary applications, as well as the development of novel electric propulsion systems.

Mario Porru is a co-author of about 50 papers published in international journals and conference proceedings and of 1 book chapter, and has been a speaker at several IEEE conferences. Mario Porru was a recipient of four IEEE awards.

RESEARCH ACTIVITY AND INTERESTS

- Energy management
 - Management and control of energy storage systems for the integration of renewable energy sources
 - Management and control of hybrid energy storage systems for microgrids
 - Optimal charging/discharging strategies for electric vehicles operating in V2G systems
 - Planning and design of charging infrastructures for electric vehicles
- Electric Propulsion
 - Development of a novel and highly integrated electric propulsion system
 - Design and control of high-speed permanent magnet synchronous machines
 - Design of magnetic gear transmission systems
- Power Electronics
 - Novel PWM techniques for DC/AC Neutral-Point-Clamped multilevel converters
- Real-time simulations, Hardware-in-the-loop (HIL) and Rapid-Control-Prototyping (RPC) for electric propulsion systems, energy storage systems, electrical drives, microgrids

PUBLICATIONS

- Scopus
- Google Scholar

TEACHING ACTIVITY

- Supervisor and co-supervisor of Bachelor and Master Thesis in Electrical Engineering and Master Thesis in Energy Engineering
- Professor of Electric Vehicles within the master's degrees in Electrical Engineering and Energy Engineering, 50 hours (AYs 18/19-on going)
- Professor of Energy Management within the master's degrees in Electrical Engineering and Energy Engineering, 30 hours (AYs 22/23-on going)
- Teaching assistant of "Energy Management and Electric Vehicles" within the master's degrees in Electrical Engineering and Energy Engineering (AY 17/18)
- Teaching assistant of "Energy Management" within the master's degree in Electrical Engineering (AYs 12/13-16/17)
- Teaching assistant of "Electrical Machines" within the bachelor's degree in Electrical Engineering (AYs 12/13-15/16)

TECHNOLOGY TRANSFER ACTIVITY

Co-founder of NEPSY srl (Novel Electric Propulsion System), an academic spin-off company of the University of Cagliari, whose main activity is the development, production and marketing of innovative components and systems of high technological value for electric propulsion through the development of new highly integrated topological configurations from hardware and software points of view and/or advanced management and control systems.