CURRICULUM VITAE
of
Luca Papini

Luca Papini received the M.Eng. degree (110 cum laude) in Electrical Engineering from the University of Pisa, Italy, in 2011 and the Ph.D. in Electrical and Electronic Engineering in 2018 from the University of Nottingham, UK, in 2018. From 2013 to 2019 he was Assistant Researcher and then Research Fellow in the PEMC group at the University of Nottingham. He has been Visiting Researcher at the National Technical University of Athens in 2014 and Visiting Researcher at Aalto University in 2018. In 2018 he has been awarded the JSPS Fellowship at the Mechanical Department at the Shizuoka University. Between April 2019 and October 2019 he was researcher (assegno di ricerca) at the University of Pisa and from October 2019 to September 2022 he covered the position of RTD-B at the University of Pisa, Department of Energy, System, Territory and Construction (DESTeC). Since October 2022 he is Associate Professor in Electrical Machines and Drives at the University of Pisa. He has been Visiting Professor at the Universitad de Chile in October 2022.

Academic and Applied Research Activities

He collaborated at EU projects (HEMAS, GreenTaxii) and industrial projects related with electrification in the civil aviation (Airbus, Siemens, Rolls Royce), transportation (Cummins) and energy (ABB) sectors, digital twin technology (NewTwen). He has been collaborating with international institutions in the study of electrical drives for electromechanical actuators in the civil aviation industry, development of electro-hydraulic systems for heavy duty machinery and for artic applications; high speed bearingless electrical machine; active magnetic bearings.

His research interests includes multi-physics (electromagnetic, thermal, mechanical and rotor-dynamic) modelling, advanced computation and analysis of electrical machines and drives, analytical modelling (subdomain and numerical-analytical) and design of unconventional electrical machines (axial flux, homopolar, consequent pole), high speed (solid rotor induction motor, permanent magnet motors) and high power density electrical machines. He has interest in levitating systems, active magnetic bearings, bearingless machines and their modelling and control for a wide range of application (medical, energy storage) together with the study of advanced electrical machines and power electronics for renewable energy, transportation (mainly aviation and on ground vehicles) and industry (automation of industrial processes). No fossil-fuel research funding and the research has not been performed for military applications. He authored around 50 international publications in his fields of competence.

Teaching Activities

From 2012 to 2015 he has been laboratory assistant at the module of “Power Electronics Construction” (Prof. Castellazzi) and “Advanced Electrical Machines” (Prof. Hamiti, Prof. Cox) at the M.Sc. in Electrical and Electronical Engineering at the University of Nottingham. In the academic year 2020/2021 he has been responsible for the module “Sistemi di Utilizzazione dell’Energia Elettrica” that in the following years has become “Electrical Machines and Drives for Energy, Industry and Transportation” (in English) at the third year of the bachelor degree in Energy Engineering at the University of Pisa. He has supervised 3 Ph.D. students/projects and the development of 5 Ms.C. student thesis (both at the Nottingham University and at the University of Pisa). He is currently supervisor of 3 Ph.D. student. He is currently supporting the Formula-SAE team of the University of Pisa in the development of the electrical power train.

Management Activities

He has been elected in the “Giunta di Dipartimento” (DESTEC) at the University of Pisa between 2020 and 2022.