



Luca Peretti

KTH Royal Institute of Technology
School of Electrical Engineering and Computer Science
Department of Electrical Engineering
Division of Electric Power and Energy Systems
Teknikringen 33, SE-10044 Stockholm, Sweden

☎ +46 8 790 77 55

📞 +46 72 734 33 55

✉ lucap@kth.se

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Current job position and roles

- Sep. 2018 - today **Associate professor, Docent, deputy Head of Division (currently acting Head)**, KTH Royal Institute of Technology, school of Electrical Engineering and Computer Science, department of Electrical Engineering, division of Electric Power and Energy Systems, Stockholm, Sweden.
<https://www.kth.se/profile/lucap>
- Oct. 2020 - today **Theme co-leader**, Swedish Electromobility Center, Theme 2 - Electrical machines, drive systems and charging.
<https://emobilitycentre.se/> <https://emobilitycentre.se/electrical-machines-drive-systems-and-charging/>
- Sep. 2020 - today **Partner director** at KTH for the strategical partnership with ABB.
<https://www.kth.se/en/samverkan/partnerskap/kontaktpersoner-per-partnerskap-1.417032>
- Feb. 2019 - today **Member of the doctoral programme committee as external expert**, doctoral programme in Mechatronics and Product Innovation Engineering, University of Padova, Italy.
<http://www.gest.unipd.it/it/ricerca/corsi-di-dottorato/ingegneria-meccatronica-e-dellinnovazione-meccanica-del-prodotto/organi>

Previous job positions

- Jul. 2016 - Sep. 2018 **Affiliated faculty member**, KTH Royal Institute of Technology, school of Electrical Engineering and Computer Science, division of Electric Power and Energy Systems, Stockholm, Sweden.
- Aug. 2010 - Sep. 2018 **Principal Scientist (2013-2018), Scientist (2010-2013)**, ABB Corporate Research, Västerås, Sweden.
<https://global.abb/group/en>
- Mar. 2006 **Technical consultant**, Electrolux home products Italy S.p.A., Core technology and innovation (CTI), Porcia (PN), Italy.
<https://www.electroluxgroup.com/en/>
- Jul. 2003 - Sep. 2003 **Software engineer**, Littech Litùm Technology, S.r.l., Amaro (UD), Italy.

Education

- Jan. 2009 - Jul 2010 **Post-doctoral researcher**, University of Padova, Department of Management and Engineering, Vicenza, Italy.
<https://www.unipd.it/en/>
http://www.gest.unipd.it/en?set_language=en

- Nov. 2007 - **Visiting Ph.D. student**, ABB Corporate Research, Västerås, Sweden.
Mar. 2008
- Jan. 2006 - **Ph.D. in Industrial Engineering, program in Mechatronics and Industrial Systems**, University of Padova, Department of Management and Engineering, Vicenza, Italy.
Dec. 2008
- Nov. 2005 - **Post-graduate researcher**, University of Padova, Department of Electrical Engineering (now Department of Industrial Engineering), Padova, Italy.
Dec. 2005
<https://www.dii.unipd.it/en/>
- May 2005 - **Post-graduate researcher**, University of Udine, Department of Electrical, Management and Mechanical Engineering (now Department of Engineering and Architecture), Udine, Italy.
Dec. 2005
https://www.uniud.it/en/uniud-international?set_language=en
<https://dpia.uniud.it/site/>
- Sep. 1999 - **M. Sc. in Electronic Engineering**, University of Udine, Udine, Italy, grade: 110/110 *cum laude*.
Apr. 2005

Engineering association memberships

2006 - 2008,
2021 - today Senior Member of the **IEEE Institute of Electrical and Electronics Engineers**
<https://www.ieee.org/>

Editorial services

2019 - today Associate Editor of the open-access (from 2021) journal **IET Electric Power Applications**
<https://digital-library.theiet.org/content/journals/iet-epa>

2006 - today Reviewer for the following journals: IET Electric Power Applications Journal, IEEE Transactions on Industrial Electronics, IEEE Transactions on Industry Applications, IEEE Transactions on Power Electronics, IEEE Transactions on Emerging and Selected Topics in Power Electronics, IEEE Transactions on Energy Conversion, IEEE Transactions on Mechatronics, IEEE Transactions on Industrial Informatics, IEEE Transactions on Control System Technology

Conference services

2023 Track Chair for the “Electrical Drives” track at the IEEE International Conference on Electrical Machines (ICEM 2024), Torino, Italy, 2024.
<https://www.icem.cc/>

2013 Co-organiser of the Special Session “Special Electrical Machines and Drives for Traction and Renewable Energy Applications” at the IEEE International Conference on Industrial Technology (ICIT), Cape Town, South Africa, 25-28 February, 2013.
<https://ieeexplore.ieee.org/xpl/conhome/6495638/proceeding>

2012 Technical Program Committee Member of the International Conference on Connected Vehicles and Expo (ICCVE), Beijing, China, 12-16 December, 2012.
<https://iccve.org/2012/index.html>

2010 Local Organising Committee Member of the 1st IEEE Symposium on Sensorless Control for Electrical Drives (SLED), Padova, Italy, 9-10 July, 2010.
<https://ieeexplore.ieee.org/xpl/conhome/5531970/proceeding>

External evaluation services

Opponent services

- Sep. 2023 **Ph.D. dissertation**, K. Vostrov, “Reduction of non-circulating bearing currents by electrical machine design”, Lappeenranta University of Technology, Lappeenranta, Finland
<https://lutpub.lut.fi/handle/10024/166330?show=full>
- Nov. 2019 **Ph.D. dissertation**, P. Jaatinen, “Design and control of a permanent magnet bearingless machine”, Lappeenranta University of Technology, Lappeenranta, Finland
<https://lutpub.lut.fi/handle/10024/160249?show=full>
- Nov. 2019 **Ph.D. dissertation**, H. A. Ali Awan, “Control methods for permanent-magnet synchronous reluctance motor drives”, Aalto University of Technology, Helsinki, Finland
<https://aaltodoc.aalto.fi/handle/123456789/40990?show=full>
- Oct. 2014 **Ph.D. dissertation**, S. Saarakkala, “Identification and speed control design of resonating mechanical systems in electric drives”, Aalto University of Technology, Helsinki, Finland
<https://aaltodoc.aalto.fi/handle/123456789/13948?show=full>
- Oct. 2012 **Licentiate dissertation**, N. u. R. Malik, “Analysis and control aspects of brushless induction machines with rotating power electronic converters”, KTH Royal Institute of Technology, Stockholm, Sweden
<https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A551539&dswid=-9930>

Committee member services

- Jan. 2019 **Ph.D. dissertation**, R. Andersson, “On the design of electric traction machines - design and analysis of an interior permanent magnet synchronous machine for heavy commercial vehicles”, Lund University, Lund, Sweden
<https://lup.lub.lu.se/search/publication/019a0972-93c1-4ee4-a0f1-3c98d7fdca4d>
- Dec. 2016 **Ph.D. dissertation**, Y. Yao, “Study of induction machines with rotating power electronic converter”, KTH Royal Institute of Technology, Stockholm, Sweden
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1045804&dswid=-9930>

Reviewer/examiner services

- Feb. 2023 **Ph.D. dissertation**, K. Vostrov, “Reduction of non-circulating bearing currents by electrical machine design”, Lappeenranta University of Technology, Lappeenranta, Finland
<https://lutpub.lut.fi/handle/10024/166330?show=full>
- Aug. 2022 **Ph.D. dissertation**, A. Bhaumik, “Predictive control strategies for speed sensorless induction motor drives”, Indian Institute of Technology (Indian School of Mines), Dhanbad, India
- Oct. 2020 **Ph.D. dissertation**, K. Kiran, “Limited range variable speed operation of brushless doubly-fed reluctance machine using model predictive control technique under primary flux orientation”, Indian Institute of Technology (Indian School of Mines), Dhanbad, India
- Nov. 2019 **Ph.D. dissertation**, P. Jaatinen, “Design and control of a permanent magnet bearingless machine”, Lappeenranta University of Technology, Lappeenranta, Finland
<https://lutpub.lut.fi/handle/10024/160249?show=full>

Faculty position evaluation services

- Aug. 2020 External expert for the evaluation of the candidates to the position of **Professor of Electrical Machines (tenured or tenure track)**, Tallin University of Technology, Estonia.
<https://www.taltech.ee/en>

Students supervision

Ph.D. level

I am currently co-supervising a number of Ph.D. students in projects with different starting/closing dates. Please refer to my profile page for details (<https://www.kth.se/profile/lucap>).

M.Sc. level

As supervisor

2023 V. Deshpande, “Hardware in loop simulations of electric drives”, KTH Royal Institute of Technology, Sweden.

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2023 E. Lindberg, “Sensorless Control of Synchronous Reluctance Machines and Permanent Magnet Synchronous Machines for Pump Applications”, KTH Royal Institute of Technology, Sweden.

<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1813700&dswid=3738>

2023 A. Haseeb Khan, “Methodology development for reliability and availability analysis of ABB’s large synchronous machines”, Université de Lorraine, France.

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2022 P. Subramaniyane, “Continuous control set-model predictive control of permanent magnet synchronous motor”, KTH Royal Institute of Technology, Sweden.

<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1737860&dswid=-9895>

2022 S. Sathyamoorthy, “Finite control set-model predictive control of permanent magnet synchronous motor”, KTH Royal Institute of Technology, Sweden.

<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1737858&dswid=-8877>

2022 S. Lundberg, “Sensorless control of synchronous machines in Python using signal injection”, KTH Royal Institute of Technology, Sweden.

<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1710387&dswid=9583>

2022 J. Deng, “Pulse-width voltage modulation in the Python-based open-source simulator Motulator”, KTH Royal Institute of Technology, Sweden.

<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1750930&dswid=8099>

- 2022 E. Niemelä, “Real-time rotor temperature estimation method for interior permanent magnet synchronous machines”, KTH Royal Institute of Technology, Sweden.
<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1737838&dswid=-7920>
- 2021 R. Montalba Mesa, “Online parameter estimation of a six-phase machine for marine application”, KTH Royal Institute of Technology, Sweden.
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2:1594920>
- 2021 Y. P. Frei, “Analysis of different switching patterns to minimize losses in a six-phase drive for marine application”, KTH Royal Institute of Technology, Sweden.
<http://urn.kb.se/resolve?urn=urn%3Anbn%3Ase%3Akth%3Adiva-304991>
- 2021 G. Sivaraman, “Development of PMSM and drivetrain models in MATLAB/Simulink for model based design”, KTH Royal Institute of Technology, Sweden.
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2:1590831>
- 2020 F. Toffoli, “Control implementation aspects for a switchable n-phase machine”, University of Padova, Italy in visit at KTH Royal Institute of Technology, Sweden.
<http://tesi.cab.unipd.it/64682/>
- 2020 P. Miceli, “FPGA implementation of an A/D conversion and a pulse width modulation with interleaving for a multiphase drive system”, Polytechnic of Torino, Italy in visit at KTH Royal Institute of Technology, Sweden.
<https://webthesis.biblio.polito.it/14542/>
- 2020 D. Garibaldi, “Safe torque estimation through neural network”, KTH Royal Institute of Technology, Sweden in visit at Inmotion Technologies AB, Sweden.
<http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1498878&dswid=5775>
- 2020 H. Mosadeghi, “Modeling and control of a fault-tolerant multiphase induction motor drive”, University of Bologna, Italy in visit at KTH Royal Institute of Technology, Sweden.
<https://amslaurea.unibo.it/20775/>
- 2019 C. Andruetto, “Feasibility analysis of the drive train electrification for a rescue boat”, KTH Royal Institute of Technology, Sweden.
<http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1381377&dswid=8893>

- 2019 F. Gardiman, “Implementation and testing of MHz-range digital conversion of phase current measurements for electric drives”, University of Padova, Italy in visit at KTH Royal Institute of Technology, Sweden.
<http://tesi.cab.unipd.it/63674/>
- 2019 M. Giuliano, “Current oversampling analysis for advanced control of electric AC drives”, University of Padova, Italy in visit at KTH Royal Institute of Technology, Sweden.
<http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1421258&dswid=-9403>
- 2018 A. Gupta, “Design and implementation of a test bench for rotating power electronics”, KTH Royal Institute of Technology, Sweden in visit at ABB Corporate Research, Sweden.
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1323575&dswid=-7798>
- 2018 D. Michielin, “Design of a current oversampling board for electrical drives. Experimental testing in a machine parameters evaluation”, University of Padova, Italy in visit at ABB Corporate Research, Sweden.
<http://tesi.cab.unipd.it/59685/>
- 2018 A. Scacco, “FEM analysis of parasitic capacitances in a synchronous machine to derive the equivalent circuit parameters”, University of Padova, Italy in visit at ABB Corporate Research, Sweden.
- 2018 G. Gullone, “Sensorless algorithm for synchronous machines using current oversampling and PWM harmonics”, KTH Royal Institute of Technology, Sweden in visit at ABB Corporate Research, Sweden.
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1272232&dswid=-7798>
- 2016 F. Mizzon, “Analysis of the integration of two DFIGs with rotating power electronics for wind energy application”, University of Padova, Italy in visit at ABB Corporate Research, Sweden.
<http://tesi.cab.unipd.it/view/people/Mizzon=3AFederico=3A=3A.html>
- 2014 T. Rogg, “Self-commissioning flux estimation with cross-magnetisation effects in synchronous reluctance machines”, Karlsruhe Institute of Technology, Germany in visit at ABB Corporate Research, Sweden.
https://www.eti.kit.edu/english/mitarbeiter_1870.php
- 2013 P. Makolo, “Wind generator co-simulation with fault case analysis”, Chalmers University of Technology, Sweden in visit at ABB Corporate Research, Sweden.
<https://odr.chalmers.se/handle/20.500.12380/179741>

2012 M. U. Akthar, “Variable speed drive for an alternative solution to a micro-hydro power plant”, KTH Royal Institute of Technology, Sweden in visit at ABB Corporate Research, Sweden.
<http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A576280&dswid=-6469>

2011 G. Zanuso, “Online parameters estimation for synchronous motor drives”, University of Padova, Italy in visit at ABB Corporate Research, Sweden.
<http://tesi.cab.unipd.it/34964/>

As examiner

2023 Y. Lin, “Analogue circuit for detection of ageing phenomena in electric drives”, KTH Royal Institute of Technology, Sweden.

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2023 X. Zhao, “Enhancing servo system performance: robust nonlinear deadbeat predictive current control for permanent magnet synchronous motors”, KTH Royal Institute of Technology, Sweden.

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2023 S. Weideskog, “FPGA based control of multiple electric machines for marine propulsion systems”, KTH Royal Institute of Technology, Sweden.

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2023 F. Lien-Oscarsson, “Filling the gap within micromobility: prototype of a small efficient foldable electric vehicle with long range”, KTH Royal Institute of Technology, Sweden.

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2023 E. Ametller, “Investigation of current sensing techniques for a high bandwidth application”, KTH Royal Institute of Technology, Sweden.

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2023 C. Huang, “Adaptive model-based temperature monitoring for electric powertrains”, KTH Royal Institute of Technology, Sweden.

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2022 C. Henriksson, “Fault diagnosis of a variable pole-phase motor”, KTH Royal Institute of Technology, Sweden.
<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1752829&dswid=5582>

2022 R. Raj, “Development of an investigation method to analyse effect of laser cutting on iron losses in an electric machine”, KTH Royal Institute of Technology, Sweden.
<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1710388&dswid=-6185>

- 2022 D. Li, “Machine learning models for estimating temperatures of electric powertrains”, KTH Royal Institute of Technology, Sweden.
<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1749477&dswid=-1179>
- 2021 X. Shan, “Field oriented current control with harmonic injection in a six-phase induction machine”, KTH Royal Institute of Technology, Sweden.
<https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1633675&dswid=1619>
- 2021 T. Sayed Hamad, “Quality assuring of stator winding production”, KTH Royal Institute of Technology, Sweden.
<https://kth.diva-portal.org/smash/record.jsf?pid=diva2:1601455>
- 2021 L. Colombo, “Electromagnetic sizing of axial-flux induction machines and experimental validation”, KTH Royal Institute of Technology, Sweden.
<http://urn.kb.se/resolve?urn=urn%3Anbn%3Ase%3Akth%3Adiva-307473>
- 2021 D. Radhakrishnan, “Modelling of air-gap harmonic torques and its impact on vibrations in electric drivetrain”, KTH Royal Institute of Technology, Sweden.
<http://urn.kb.se/resolve?urn=urn%3Anbn%3Ase%3Akth%3Adiva-307477>
- 2021 N. Manakshya, “Permanent magnet synchronous machine using ferrite vs rare earth magnets: how do they compare?”, KTH Royal Institute of Technology, Sweden.
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2:1598366>
- 2020 B. Pratap Singh, “Real-time detection of stator resistance unbalances in three phase drives”, KTH Royal Institute of Technology, Sweden.
<http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1505268&dswid=3571>
- 2020 F. Sunesson, “Real-time stator resistance estimation for electrical drives: a control perspective”, KTH Royal Institute of Technology, Sweden.
<https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1505241&dswid=-2138>

B.Sc. level

- 2010 L. Tagliapietra, “Sviluppo del software per la misura tramite FPGA di segnali PWM” (in Italian), University of Padova, Italy.

- 2008 M. Zardetto, “Stato dell’arte dell’identificazione parametrica per azionamenti con motore asincrono” (in Italian), University of Padova, Italy.
<http://tesi.cab.unipd.it/22874/>
- 2008 F. Pegorin, “Stato dell’arte nell’identificazione dei parametri per motori asincroni - tecniche on-line” (in Italian), University of Padova, Italy.
<http://tesi.cab.unipd.it/22855/>
- 2008 F. A. Seganfredo, “Raddrizzatore sincrono senza misura della tensione di linea” (in Italian), University of Padova, Italy.
<http://tesi.cab.unipd.it/22888/>
- 2007 M. Vezzano, “Electric motor drives for marine applications” (in Italian), University of Padova, Italy.
- M. Spagnolo, “Studio e realizzazione di una tecnica innovativa di controllo per gruppo elettrogeno” (in Italian), University of Padova, Italy.
- 2005 P. Perusini, “Progetto ed analisi di sistemi di posizionamento per applicazioni nel settore tessile” (in Italian), University of Udine, Italy.
- 2005 S. Ceschia, “Progetto di un algoritmo off-line di posizionamento per azionamenti elettrici” (in Italian), University of Udine, Italy.

Internships

- 2023 A. Witrant, “FEM simulation of a variable phase pole induction machine”, Mines Paris - PSL University - ENS-Paris-Saclay, France in visit at KTH Royal Institute of Technology, Sweden.
- 2023 J. Marko, “Parameter identification of electric machines for student education purpose”, Technical University of Dresden, Germany in visit at KTH Royal Institute of Technology, Sweden.
- 2022 N. Fuchs, “Distributed control of a six-phase motor”, Technical University of Berlin, Germany in visit at KTH Royal Institute of Technology, Sweden.
- 2021 F. P. Xintaropoulos, “Experimental evaluation of the fault-tolerance behaviour of a variable phase-pole induction machine”, National Technical University of Athens, Greece in visit at KTH Royal Institute of Technology, Sweden.
- 2019 A. Dennaoui, “Evaluation of the latency response of a Linux kernel patch for a DSP-based control board for electric drives”, University of Bologna, Italy in visit at KTH Royal Institute of Technology, Sweden.
- 2014 S. Neusüs, “Analysis of algorithms for on-line direct frequency estimation”, Technical University of Darmstadt, Germany in visit at ABB Corporate Research, Sweden.

- 2014 D. Woog, “A device for V/I measurements in electrical machines - design, realisation and tests”, Technical University of Darmstadt, Germany in visit at ABB Corporate Research, Sweden.

Individual projects

- 2023 R. C. Messina, “Software Development of a 36-phase Power Meter Using an Opal-RT”, KTH Royal Institute of Technology, Sweden.
- 2023 L. Grigelionis, “Linear Hardware-in-the-Loop model of a permanent magnet synchronous machine (PMSM) using Vitis HLS”, KTH Royal Institute of Technology, Sweden.
- 2022 R. Raj and P. Subramaniyane, “A novel design, modelling and control of a concentrated wound pole phase modulating induction machine with two modes of operation”, KTH Royal Institute of Technology, Sweden.
- 2022 S. Sriram, “Bench testing of six-phase induction machine and disturbance observer”, KTH Royal Institute of Technology, Sweden.
- 2022 W. Sheng, “Development of a laboratory test bench with back-to-back motors”, KTH Royal Institute of Technology, Sweden.
- 2021 J. Deng, “Analog front-end for a power meter intended for variable-phase-pole machines”, KTH Royal Institute of Technology, Sweden.
- 2021 N. Mirón Gracia, “Robust control of electrical induction machines using disturbance observers”, KTH Royal Institute of Technology, Sweden.
- 2020 G. Soares de Bem, “Analysis and testing of a signal conditioning circuit for drive measurements acquisition”, KTH Royal Institute of Technology, Sweden.
- 2020 S. Ramasundaram, “Communication interface board for multiphase drive”, KTH Royal Institute of Technology, Sweden.

Teaching activities

- 2022 - today Responsible of the course EJ2230 “Control in Electrical Energy Conversion”, 6 credits, KTH Royal Institute of Technology, Stockholm, Sweden.
<https://www.kth.se/student/kurser/kurs/EJ2230?l=en>
- 2021 - today Responsible of the course EJ2222 “Design of Electrical Machines”, 7.5 credits, KTH Royal Institute of Technology, Stockholm, Sweden.
<https://www.kth.se/student/kurser/kurs/EJ2222?l=en>
- 2019 - today Responsible of the course EJ2201 “Electrical machines and drives”, 6 credits, KTH Royal Institute of Technology, Stockholm, Sweden.
<https://www.kth.se/student/kurser/kurs/EJ2201?l=en>

- 2021 - today Guest lecturer in the course EG2340 “Wind power systems”, 4 hours, KTH Royal Institute of Technology, Stockholm, Sweden.
- 2020 Guest lecturer in the course EJ2222 “Design of electric machines”, 4 hours, KTH Royal Institute of Technology, Stockholm, Sweden.
- 2018 Guest lecturer in the course EJ2201 “Electrical machines and drives”, 6 hours, KTH Royal Institute of Technology, Stockholm, Sweden.
- 2018 Guest lecturer in the course MF2101 “Machine design”, 2 hours, KTH Royal Institute of Technology, Stockholm, Sweden.
- 2012 - 2019 Guest lecturer (once per year) in the course “Fundamentals of machines and electric drives”, 8 hours, B.Sc. program in Mechatronic Engineering, University of Padova, Vicenza, Italy. In 2012 and 2013, the guest lectures were funded by the Erasmus Lifelong Learning Programme.
- 2009 - 2011 Guest lecturer (once per year) in the course “Industrial electric drives”, 20 hours in 2009 / 8 hours in 2010 and 2011, M.Sc. program in Mechatronic Engineering, University of Padova, Vicenza, Italy. In 2010 and 2011, the guest lectures were funded by the Erasmus Lifelong Learning Programme.
- 2006 - 2009 Guest lecturer (once per year) in the course “Machines and electric drives”, 6 hours in 2006 and 2008 / 8 hours in 2007 and 2009, B.Sc. program in Mechatronic Engineering, University of Padova, Vicenza, Italy.
- 2006 Guest lecturer in the course “Electric drives I”, 4 hours, M.Sc. program in Electrical Engineering, University of Padova, Padova, Italy.
- 2005 Guest lecturer in the course “Electric drives II”, 4 hours, M.Sc. program in Electronic Engineering, University of Udine, Udine, Italy.

Computer skills

Operating systems	Windows, Linux
Software suites	Microsoft Office, Apache OpenOffice, Mathworks Matlab/Simulink, Xilinx ISE, Kicad, Pspice, FEMM
Programming languages	C, C++, VHDL, Pascal, Cobol, L ^A T _E X
Control prototyping systems	DSPACE 1104, OPAL-RT OP5600 and OP4510, Xilinx Virtex 5 and Virtex 6 FPGAs, Beaglebone Black, Texas Instruments F28069 Piccolo controlCARD

Languages

Mother tongue	Italian
Proficient user (CEFR C2 level)	English
Proficient user (CEFR C1 level)	Swedish
Basic user (CEFR A1 level)	German

Other information

Driving license type B.

Publications (updated February 1, 2024)

Patents

- [1] M. Beniakar and L. Peretti, “Control and drive of a rotating machine with an inner and an outer stator,” EU Patent EP3 540 924 (B1), Oct. 18, 2023, also published as EP3540924 (A1), EP3540924 (C0), CN111801880 (A), JP2021516523 (A), KR20200116156 (A), US2021075302 (A1), WO2019174981 (A1). [Online]. Available: https://worldwide.espacenet.com/publicationDetails/biblio?CC=EP&NR=3540924B1&KC=B1&FT=D&ND=12&date=20231018&DB=EPODOC&locale=en_EP
- [2] —, “Double-stator PM machine with 3rd order current harmonic injection,” US Patent US11 316 463 (B2), Apr. 26, 2022, also published as CN111435813 (A), CN111435813 (B), EP3681031 (A1), EP3681031 (B1), US2020228041 (A1). [Online]. Available: https://worldwide.espacenet.com/publicationDetails/biblio?CC=US&NR=11316463B2&KC=B2&FT=D&ND=7&date=20220426&DB=EPODOC&locale=en_EP
- [3] O. Ikram ul Haq and L. Peretti, “Method of controlling an electrical machine,” US Patent US11 121 656 (B2), Sep. 14, 2021, also published as US2020144947 (A1), CN111162713 (A), EP3651346 (A1). [Online]. Available: https://worldwide.espacenet.com/publicationDetails/biblio?CC=US&NR=11121656B2&KC=B2&FT=D&ND=6&date=20210914&DB=EPODOC&locale=en_EP
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