

Nicolò Marconato

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Consorzio RFX, Corso Stati Uniti 4, 35127 Padova

RESEARCH AREA

I am a research associate at Department of Industrial Engineering of the University of Padova.

I am electrical engineer and I perform my research activity mainly in the field of fusion science and technology.

My main research topics are:

- Numerical modeling of electromagnetic and multi-physics problems
- Design and optimization of high voltage components (in vacuum and high pressure gases)
- Magnetic field measurements
- Real time control of magnetic confined fusion-relevant plasmas
- Negative ion sources and Neutral beam injectors

Education

Ph.D. in Fusion Science and Engineering

University of Padova

University of Lisbon

2012

Master's degree in Electrical Engineering

University of Padova

2008

Bachelor's degree in Energy Engineering

University of Padova

2005

Teaching activity

Electrotechnics for Environmental Engineering

University of Padova

2018-19

Circuit theory for Computer Engineering

University of Padova

2019-20 – 2020-21

Measurements and models for high voltage technology

University of Padova

2020-21

European doctorate in Fusion Science and Engineering

University of Padova

2018-19 – 2020-21

Publications

N. Marconato et al., “An optimized and flexible configuration for the magnetic filter in the SPIDER experiment”, *Fusion Engineering and Design*, 2021, 166, 112281

N. Marconato et al., “Accurate magnetic sensor system integrated design”, *Sensors*, 2020, 20(10), 2929

V. Toigo, “Progress in the ITER neutral beam test facility”, *Nuclear Fusion*, 2019, 59(8), 086058

L. Marrelli et al., “Upgrades of the RFX-mod reversed field pinch and expected scenario improvements”, *Nuclear Fusion*, 2019, 59(7), 076027

N. Marconato et al., “Design of the new electromagnetic measurement system for RFX-mod upgrade”, *Fusion Engineering and Design*, Volume 146, Part A, September 2019, Pages 906-909

N. Marconato et al., “Prediction of lightning impulse voltage induced breakdown in vacuum interrupters”, *IEEE Transactions on Dielectrics and Electrical Insulation*, 2017, 24(6), pp. 3367–3373

N. Marconato et al., “Magnetic and thermo-structural design optimization of the Plasma Grid for the MITICA neutral beam injector”, *Fusion Engineering and Design*, 2015, 96-97, pp. 517–521

S. Peruzzo et al. “Integrated procedure for halo current reconstruction in ITER”, *IEEE Transactions on Plasma Science*, 2013, 41(1), pp. 257–262, 6387318

N. Marconato et al., “Simulation, code benchmarking and optimization of the magnetic field configuration in a Negative Ion Accelerator”, *Fusion Engineering and Design*, 2011, 86(6-8), pp. 925–928