

Rebecca Riccioli

CV

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Birthday 11/07/92



Education

- 2018–2021 **Ph.D. degree in Engineering Sciences**, *University of Aix-Marseille, France, with jury's congratulations.*
- 2015–2018 **Master degree in Energy Engineering**, *University of Bologna, Italy, 110/110 with honours.*
- 2011–2015 **Bachelor degree in Energy Engineering**, *University of Bologna, Italy, 106/110.*

Experience

2022–present **Magnet Engineer**, *Paul Scherrer Institut, Switzerland.*

- Magnetic design of resistive and radiation-hard magnets for the PSI proton accelerator new beamlines (IMPACT project) based on the main beam optics specifications
- Electromagnetic modelling and thermal study of superconducting magnets for proton therapy
- Development of numerical tools for AC losses assessment in insulated HTS pancakes and HTS solenoids
- Experimental campaigns on superconducting coils for AC losses study: electromagnetic and mechanical design of small solenoids for conductors testing and tests follow-up
- Magnetic measurements with rotating coil, hall probes and Helmholtz coils systems for SLS 2.0 project at PSI

2018–2021 **Ph.D. Program on electro-mechanical study of fusion cables**, *CEA Cadarache, France.*

- Experimental campaigns on Nb3Sn wires: design with CATIA V5, management, production
- Electro-mechanical modelling of different Nb3Sn CICC codes (MULTIFIL and THELMA codes)
- Development of analytical models to support numerical models and results

2017–2018 **Master Internship**, *ITER Organization & CEA Cadarache, France.*

- Use and upgrade of the finite elements code MULTIFIL to simulate fusion conductors
- Electrical analysis of the SULTAN campaign tests on TFIO samples for ITER Organization

2014–2015 **Bachelor Internship**, *University of Bologna, Italy.*

- Study and concept design of industrial cold plasma sources
- Management and production: experimental campaigns of plasma treatment on bacteria

Publications

- 2024 R. Riccioli et al. *Magnet Design for the High-Intensity Muon Beams Project (HIMB) at PSI's Accelerator Complex HIPA*. In: , IEEE Trans on Appl Super, vol. 34, n.5, August 2024
- 2024 S. Sanfilippo et al. *Magnets for the Upgrade of the Swiss Light Source at the Paul Scherrer Institute- Design, Production, Measurement Challenges*. In: , IEEE Trans on Appl Super, vol. 34, n.5, August 2024

- 2022 R. Riccioli et al. *Mechanical analysis of full-scale Nb3Sn CICC designs for tokamaks*. In: IEEE Trans on Appl Super, vol. 32, n.6, September 2022
- 2021 R. Riccioli et al. *Study of the ITER TF CICC mechanical behavior under cool-down and repetitive EM loadings*. In: IEEE Trans on Appl Super, vol. 31, n.5, August 2021
- 2020 R. Riccioli et al. *Advanced mechanical modeling of cyclically loaded cable-in-conduit conductors for fusion magnets*. In: IEEE Trans on Appl Super, vol. 30, n.4, June 2020
- 2019 R. Riccioli et al. *Mechanical modeling and first case study on ITER TF CICC loading cases with upgraded finite element code simulations*. In: IEEE Trans on Appl Super, vol. 29, n.5, August 2019

Awards

- Winner of the national french award *Prix Paul Caseau 2022* for the quality of the Ph.D. work on numerical modelling and simulation energy-related.

Computer skills

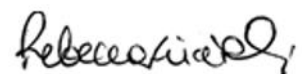
Microsoft Office	Advanced
MATLAB	Advanced
CATIA V5	Intermediate/Advanced
INVENTOR	Intermediate/Advanced
Paraview	Intermediate/Advanced
COMSOL Multiphysics	Advanced level
Opera	Intermediate level
C/C++ language	Basic level
Fortran language	Basic level

Languages

Italian	Mothertongue
French	C1 (Advanced French)
English	C1 (Advanced English)
Spanish	B2 (Upper-intermediate Spanish)
German	A1 (Beginner German)

References

- Prof. Marco Breschi, University of Bologna, email address: marco.breschi@unibo.it
- Mr. Alexandre Torre, CEA (France), email address: alexandre.torre@cea.fr
- Dr. Stéphane Sanfilippo, PSI, email address: stephane.sanfilippo@psi.ch



Villigen, May 29, 2024