

CURRICULUM VITAE OF MARCELO JOSÉ COLAÇO

CONTACT INFORMATION:

Mailing Address: Dept. of Mech. Engineering, Politécnica/COPPE
Federal University of Rio de Janeiro, UFRJ

CURRENT POSITION: Full Professor (tenured) / Department Head

H-INDEX: Scopus: 18 (Author ID: 7004070221); GoogleScholar: H-index 25, i10-index 73

EDUCATION:

D.Sc.	Federal University of Rio de Janeiro, Brazil (Mech. Eng.)	08/2001
M.Sc.	Federal University of Rio de Janeiro, Brazil (Mech. Eng.)	03/1998
Engineering Degree	Federal University of Rio de Janeiro, Brazil (Mech. Eng.)	10/1996

AWARDS:

One of the Best Scientists in Rio de Janeiro, Rio de Janeiro State Agency of Sci. Res., Brazil	2009-...
Member of the Scientific Council of the International Centre for Heat and Mass Transfer, Turkey	2012-...

MEMBERSHIPS:

ABCM - Brazilian Society of Mechanical Engineers: Senior Member	1995-...
ASME - American Society of Mechanical Engineers: Member	2001-...

GRANTS/CONTRACTS:

Several grants with the oil industry since 2008 (> 10 milions US Dollars).

PH.D. STUDENTS SUPERVISED:

1. Andrea Mocerino, 2019.**	6. Ricardo Padilha, 2016.	11. Luiz Abreu, 2014.
2. Inoussa Tougri, 2018.	7. Rogério Carvalho, 2016.	12. Wellington Silva, 2012.
3. Camila Lacerda, 2018.	8. Diego Estumano, 2016.	13. Tadeu Melo, 2012.
4. César Pacheco, 2018.	9. Marcus Souza, 2015.	
5. Thiago Pires, 2017.	10. Ana Magalhães, 2014.	

** Main advisors: Prof. Sara Rainieri and Prof. Fabio Bozzoli.

M.SC. STUDENTS SUPERVISED:

1. Raphael Carvalho, 2020.	11. Gabriel Romero, 2015.	21. Thiago Pires, 2010.
2. Matheus Campos, 2020.	12. César Pacheco, 2014.	22. Cláudio Teixeira, 2010.
3. Igor Jasmim, 2019.	13. Tougri Inoussa, 2014.	23. Marcus Souza, 2009
4. Guilherme Freitas, 2019.	14. Patrícia Ventura, 2014.	24. Carolina Lopes, 2009
5. João Neto, 2018.	15. Camila Lacerda, 2013.	25. Ana Magalhães, 2008.
6. Ricardo Junior, 2016.	16. Bruno Paravidino, 2013.	26. Wellington Silva, 2008.
7. Gunther Moraes, 2016.	17. Thiago Campos, 2013.	27. Marcus Valle, 2007.
8. Vander Apollinario, 2016.	18. Vinicius Sauer, 2012.	28. Paulo Silva, 2005.
9. Ivan Silva, 2015.	19. Romulo Valle, 2012.	
10. Sami Ayad, 2015.	20. Diego Estumano, 2012.	

BOOKS PUBLISHED:

- ÖZISIK, M. N. ; ORLANDE, H. R. B. ; COLAÇO, M. J. ; COTTA, R. M. . **Finite Difference Methods in Heat Transfer**. 2. ed. New York: CRC Press, 2017. v. 1. 580p .
- ORLANDE, H. R. B. ; COLAÇO, M. J. ; COTTA, C. P. N. ; GUIMARAES, G. ; BORGES, V. L. . **Inverse Problems in Heat Transfer (in Portuguese)**. São Carlos: SBMAC, 2011. v. 1. 117p .

SELECTED PAPERS IN REFERRED JOURNALS (LAST 5 YEARS):

1. *Computational Model of Silica Nanoparticle Penetration into Tumor Spheroids: Effects of Methoxy and Carboxy PEG Surface Functionalization and Hyperthermia*. **International Journal for Numerical Methods in Biomedical Engineering**, <http://dx.doi.org/10.1002/cnm.3504>, 2021.
2. *Real-time temperature estimation with enhanced spatial resolution during MR-guided hyperthermia therapy*. **Numerical Heat Transfer Part A-Applications**, v. 77, p. 782-806, 2020.
3. *Numerical investigation for steam tubes temperature reduction in a four fuels tangentially fired boiler*. **Applied Thermal Engineering**, v. 179, p. 115656-, 2020.
4. *State estimation for the thermal storage in phase change materials containing nanoparticles*. **High Temperatures-High Pressures**, v. 47, p. 117-137, 2018.
5. *State estimation problems in PRF-shift magnetic resonance thermometry*. **International Journal of Numerical Methods for Heat & Fluid Flow**, v. 28, p. 315-335, 2018.
6. *Filtered reciprocity functional approach to estimate internal heat transfer coefficients in 2D cylindrical domains using infrared thermography*. **International Journal of Heat and Mass Transfer**, v. 125, p. 1181-1195, 2018.***
7. *Determination of thermal conductivity of inhomogeneous orthotropic materials from temperature measurements*. **Inverse Problems in Science and Engineering**, v. 27, p. 1-27, 2018.
8. *Internal heat transfer coefficient estimation in three-dimensional ducts through the reciprocity functional approach - An analytical approach and validation with experimental data*. **International Journal of Heat and Mass Transfer**, v. 122, p. 587-601, 2018.***
9. *Application of nonlinear multivariable model predictive control to transient operation of a gas turbine and NOx emissions reduction*. **Energy**, v. 149, p. 341-353, 2018.
10. *Estimating gasoline performance in internal combustion engines with simulation methamodels*. **Fuel**, v. 193, p. 230-240, 2017.
11. *Self-organizing maps for pattern recognition in design of alloys*. **Materials and Manufacturing Processes**, v. 32, p. 1067-1074, 2017.
12. *Bayesian estimate of pre-mixed and diffusive rate of heat release phases in marine diesel engines*. **Journal of the Brazilian Society of Mechanical Sciences and Engineering**, v. 39, p. 1835-1844, 2017.
13. *Knocking prediction in internal combustion engines via thermodynamic modeling: preliminary results and comparison with experimental data*. **Journal of the Brazilian Society of Mechanical Sciences and Engineering**, v. 39, p. 321-327, 2017.

*** collaboration with Prof. Fabio Bozzoli.