CURRICULUM VITAE OF

MARCELO JOSÉ COLAÇO

CONTACT INFORMATION:
Mailing Address:

CURRENT POSITION: Full Professor (tenured) / Department Head

H-INDEX: **Scopus**: 17 (Author ID: 7004070221); **GoogleScholar**: H-index 24, i10-index 69

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

CITIZENSHIP:
BIRTHDATE:

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

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

M.SC. STUDENTS SUPERVISED:

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

BOOKS PUBLISHED:

1. 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 .
2. 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. *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.
2. *Numerical investigation for steam tubes temperature reduction in a four fuels tangentially fired boiler.* **Applied Thermal Engineering**, v. 179, p. 115656-, 2020.
3. *State estimation for the thermal storage in phase change materials containing nanoparticles*. **High Temperatures-High Pressures,** v. 47, p. 117-137, 2018.
4. *State estimation problems in PRF-shift magnetic resonance thermometry*. **International Journal of Numerical Methods for Heat & Fluid Flow**, v. 28, p. 315-335, 2018.
5. *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.***
6. *Determination of thermal conductivity of inhomogeneous orthotropic materials from temperature measurements*. **Inverse Problems in Science and Engineering**, v. 27, p. 1-27, 2018.
7. *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.***
8. *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.
9. *Estimating gasoline performance in internal combustion engines with simulation methamodels*. **Fuel**, v. 193, p. 230-240, 2017.
10. *Self-organizing maps for pattern recognition in design of alloys*. **Materials and Manufacturing Processes**, v. 32, p. 1067-1074, 2017.
11. *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.
12. *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.
13. *Thermography detection of contact failures in double layered materials using the reciprocity functional approach*. **Applied Thermal Engineering**, v. 100, p. 1173-1178, 2016.
14. *An analytical method to estimate spatially-varying thermal contact conductances using the reciprocity functional and the integral transform methods: Theory and experimental validation*. **International Journal of Heat and Mass Transfer**, v. 100, p. 599-607, 2016.
15. *Real-time identification of a high-magnitude boundary heat flux on a plate*. **Inverse Problems in Science & Engineering**, v. 24, p. 1-19, 2016.
16. *Algorithms for design optimization of chemistry of hard magnetic alloys using experimental data*. **Journal of Alloys and Compounds**, v. 682, p. 454-467, 2016.
17. *Inverse determination of spatially varying material coefficients in solid objects*. **Journal of Inverse and Ill-Posed Problems**, v. 24, p. 181-194, 2016.
18. *Multi-objective optimization of micro pin-fin arrays for cooling of high heat flux electronics with a hot spot*. **Heat Transfer Engineering**, v. 38, p. 1235-1246, 2016.

*** collaboration with Prof. Fabio Bozzoli.