Gustavo Rabello dos Anjos

Professional address: Bureau: ME G0 520
EPFL - STI - IGM - LTCM
ME Station 9
1015 Lausanne, Switzerland
Office number: +41 21 6935442
E-mail: gustavo.rabello@epfl.ch
Webpage: http://gustavo.rabello.org
Webpage: http://ltcm.epfl.ch

Home address: Av. Druey 32
CH-1018 Lausanne, Switzerland
Phone number: +41 21 6473817
Mobile number: +41 762328894
E-mail: gustavo.rabello@gmail.com
Born on September 5th,1980 in Rio de Janeiro
Civil state: single

FORMATION

2008-summer 2012 École Polytechnique Fédérale de Lausanne (EPFL)
@: http://www.epfl.ch
Ph.D. at Heat and Mass Transfer Laboratory
Director: John R. THOME
Thesis: **A 3D ALE Finite Element Method for Microscale Two-Phase Flows**

2005-2007 Federal University of Rio de Janeiro, (UFRJ / COPPE)
@: http://www.ufrj.br
Masters at Metallurgy and Materials Engineering Department
Director: Jose PONTES and Norberto MANGIAVACCHI
Thesis: **Hydrodynamic Field Solution on Electrochemical Cells Through Finite Element Method**

2000-2005 State University of Rio de Janeiro (UERJ)
@: http://www.uerj.br
Bachelor at Mechanical Engineering Department
Director: Mila R. AVELINO
Project: **Atmospheric Boundary Layer Simulation on Wind Tunnel**

LANGUAGES

• portuguese - mother language
• english - read, write and speak
• french - read, write and speak
• spanish - read and listen (elementary level)

INFORMATICS

Numerical languages

C/C++, python, fortran, matlab, bash

Operating systems

Unix/Linux, MacOS and Windows network administration

PROFESSIONAL EXPERIENCE

2007-2008 GESAR - Group of Environmental Simulations of Hydropower Reservoirs

State University of Rio de Janeiro, UERJ

Mechanical Engineering Department

Abstract: software development of a numerical simulator capable of predicting the dynamical properties of hydropower reservoirs fulfillment. The discretization of Navier-Stokes's equations was made by the Finite Element Method.

PUBLICATIONS & CONGRESSES

1. ANJOS, G.R., Borhani, N., Mangiavacchi, N., Thome, J.R. - A 3D ALE-FEM Method for Two-Phase Flows - **Journal of Computational Physics**, 2011 (To be submitted).

2. ANJOS, G.R., Mangiavacchi, N., Pontes, J, Mattos, O.R. - Rotating Disk Flow in Electrochemical Cells: A Three-Dimensional Finite Element Method Formulation, **Journal of Electrochemical Society**, 2011 (To be submitted).

3. ANJOS, G.R., Borhani, N., Mangiavacchi, N., Thome, J.R. - 3D Moving Mesh Technique for Microscale Two-Phase Flows, Tel-Aviv, Israel, **49th European Two-Phase Flow Group Meeting**, 2011.

4. ANJOS, G.R., Borhani, N., Thome, J.R. - A 3D ALE-FEM Method for Microscale Two-Phase Flows, London, USA, **48th European Two-Phase Flow Group Meeting**, 2010.

5. Pontes, J., Mangiavacchi, N., ANJOS, G.R.- Estabilidade Hidrodinâmica em Células Eletroquímicas Editor: Ciência Moderna - Modelagem Computacional em Materiais **Chapter 1,** 2008.

6. ANJOS, G.R., Pontes, J., Mangiavacchi, N., Botelho, C. - FEM -DNS of Coupled Flow and Transport in Rotating-Disk Electrochemical Cells In: 14th International Conference on Finite Elements in Flow Problems, 2007, Santa Fe, USA. **14th International Conference on Finite Elements in Flow Problems**, 2007.

7. ANJOS, G.R., Mangiavacchi, N., Pontes, J., Botelho, C., Carvalho, L.M. - Aproximação Semi-lagrangeana para as Equações de Navier-Stokes Acopladas ao Transporte de Espécies Químicas In: Congresso Nacional de Matemática Aplicada e Computacional, 2007, Florianópolis, Brazil. **XXX CNMAC - Congresso Nacional de Matemática Aplicada e Computacional**, 2007.

8. Pontes, J., ANJOS, G.R., Mangiavacchi, N. - Finite-element method simulation of rotating disk flow: effect of the transport of a chemical species In: 6th International Congress on Industrial and Applied Mathematics, 2007, Zurich, Switzerland. **6th International Congress on Industrial and Applied Mathematics**, 2007.

9. ANJOS, G.R., Mangiavacchi, N., Pontes, J. - Numerical Modelling of the hydrodynamic field coupled to the transport of chemical species through the finite-element method In: 6th International Congress on Industrial and Applied Mathematics, 2007, Zurich, Switzerland. **6th International Congress on Industrial and Applied Mathematics**, 2007.

10. Pontes, J., Mangiavacchi, N., ANJOS, G. R.- Hydrodinamic Stability In Electrochemical Cells In: X Encontro de Modelagem Computacional, 2007, Nova Friburgo, Brazil. **X Encontro de Modelagem Computacional**, 2007.

11. ANJOS, G.R., Mangiavacchi, N., Pontes, J., Botelho, C. - FEM Simulation of Coupled Flow and Scalar Transport in Hydropower Plant Reservoris In: 14th International Conference on Finite Elements in Flow Problems, Santa Fe, USA. **14th International Conference on Finite Elements in Flow Problems**, 2007.

12. ANJOS, G.R. - Hydrodynamic Field Solution on Electrochemical Cells Through Finite Element Method. In: UFRJ/COPPE, Rio de Janeiro, Brazil. **M.Sc. Dissertation**, 2007.

13. ANJOS, G.R., Mangiavacchi, N, Pontes, J., Botelho, C. - Finite Element Method for Low Froude Number Saint-Venant Equations In: Congresso Nacional de Matemática Aplicada, 2006, Campinas - Brazil. **Congresso Nacional de Matemática Aplicada**, 2006.

14. ANJOS, G.R., Mangiavacchi, N., Pontes, J., Botelho, C. - Modelagem Numérica de Escoamentos Acoplados ao Transporte de Uma Espécie Química por Elementos Finitos In: Congresso Brasileiro de Engenharia e Ciências Térmicas, Curitiba, Brazil. **Proceedings of the 11th. Brazilian Congress of Thermal Sciences and Engineering**, 2006.

15. ANJOS, G.R., Pontes, J., Mangiavacchi, N., Botelho, C. - Simulação Numérica das Equações de Navier-Stokes Acopladas ao Transporte de uma Espécie Química pelo Método de Elementos Finitos In: Congresso Nacional de Matemática Aplicada, 2006, Campinas, Brazil. **Congresso Nacional de Matemática Aplicada**, 2006.

16. ANJOS, G.R., Mangiavacchi, N., Pontes, J., Botelho, C. - Simulação Numérica das Equações de Saint-Venant Utilizando o Método dos Elementos Finitos In: 16o. POSMEC, 2006, Uberlândia, Brazil. **Simpósio de Pós Graduação em Engenharia Mecânica**, 2006.

17. ANJOS, G.R. - Atmospheric Boundary Layer Simulation on Wind Tunnel - In: UERJ, Rio de Janeiro, Brazil. **B.Sc. Project**, 2005.

18. Avelino, M.R., ANJOS, G.R., Kakaç, S.- Turbulent Forced Convection Air Cooling of Electronics In: 10th Brazilian Congress of Thermal Engineering and Sciences, 2004, Rio de Janeiro, Brazil. **10th Brazilian Congress of Thermal Engineering and Sciences**, 2004.

19. ANJOS, G.R., Mangiavacchi, N., Avelino, M.R. - Simulação Experimental de Camada Limite Atmosférica Costeira em Túnel de Vento In: II Congresso Sobre Planejamento e Gestão da Zona Costeira dos Países de Expressão Portuguesa, 2003, Recife, Brazil. **II Congresso Sobre Planejamento e Gestão da Zona Costeira dos Países de Expressão Portuguesa**, 2003.

20. ANJOS, G.R., GONCALVES, W. O., Avelino, M.R. - Camadas Limite Turbulentas: Leis de Parede para superfície não uniforme In: 12a Semana de Iniciação Científica, 2003, Rio de Janeiro, Brazil. **12a Semana de Iniciação Científica**, 2003.