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SHORT CURRICULUM VITAE
REINALDO R. ROSA

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Born on June 03, 1963, in Jacareí (SP), Brazil

Education and Post-Doctoral Research

- B.S. in Physics and Astronomy: Dec/1988
  Universidade Federal do Rio de Janeiro (UFRJ)
  Rio de Janeiro (RJ) Brazil.

- M.Sc. in Space Science (Astrophysics): Dec/1991
  Instituto Nacional de Pesquisas Espaciais (INPE)
  São José dos Campos (SP) Brazil.

- Doctor in Space Science (Astrophysics): Feb/1996
  Instituto Nacional de Pesquisas Espaciais (INPE)
  São José dos Campos (SP) Brazil.
  With Research (1993-1995) at Dep. of Astronomy, University of Maryland, USA, CNPq Fellowship ("Sandwish Program")

- Pos-doctorate in Computational Solar Physics: 1997
  Solar-Terrestrial Environment Laboratory (STELAB)
  University of Nagoya – Japan
  Fapesp Fellowship

Main Research and Academic Positions

- 1993-1995, Aux. researcher – Advanced Visualization Laboratory, University of Maryland, USA
- 1994, Trainee Student , Goddard Space Flight Center, NASA, Grrenbelt, USA
- 1996, Pos-doc researcher – Lab for Computing and Applied Mathematics-INPE, Brazil
- 1997, Visiting Researcher – University of Nagoya, Japan
- 2005, Visiting Researcher – ICTP, Trieste, Italy
- 2004-2007, Associate Researcher, LAC, INPE, Brazil
- 2008-present, Titular Researcher and Full Professor, LAC, INPE, Brazil

Summary of Publication, Awards and Research/Academic Activities

- Books: 2 (ISBN 858-83-2522-5; ISBN 978-85-17-00037-9)
- Number of Integral papers (refereed & full procs.): **75**
- Current PhD and MS student advising: **6** (total: **12**).
- Leader of the Project "Pattern Formation in Nonlinear Dissipative Systems" ("Jovem Pesquisador" FAPESP 2004-2007) , LAC-INPE.
- Award: Fellowship of the International Centre for Theoretical Physics for Computational Cosmology School (2005), Italy
- JPL award for Scientific Research on Turbulence, Year 2004. Jet Propulsion Laboratory and Santa Fé Institute, New Mexico, USA.
- CNPq Productivity Researcher Grant (Level 2) – Leader: Computational Space Physics Group

Membership in Scientific Associations

- PACIS, IAU, AGU, SBPC, SBF, SBMAC, SAB, SBC, ABEC

Participation in Brazilian and International Scientific Meetings: > **120**

Main Services for Educational and Scientific Organizations

- Coordinator of the Post-Graduation Program in Applied Computing, INPE, 2005-2006.
- Participation in International Scientific Meeting Committees: **08**
- Deputy Chair of 38th COSPAR Scientific Assembly, H01-Fundamental Physics in Space, Special Session on Dark Matter and Dark Energy, 2010, Bremen, Germany.
- Main Founding Member for the creation of the Pan-American Association of Computational Interdisciplinary Sciences (PACIS) in 2008 (http://epacis.org)
- General Secretary of SBMAC (Sociedade Brasileira de Computação e Matemática Aplicada), 2003-2004.
- General Secretary of PACIS, 2008-2010
- Editor-in-Chief of the J. of Computational Interdisciplinary Sci. (ISSN 1983-8409)
- Referee for Physica A
- Referee for Advances in Space Research
- Referee for Solar Physics
- Referee for Operational Research
- Referee for Nonlinear Geophysics
- Referee for Nonlinear Analysis
- Referee for Computational Geosciences
- Referee for Inverse Problems in Science & Engineering
- Referee for Brazilian Journal of Physics
- Referee for International Journal of Modern Physics C

Ten Selected Papers (from 75 published, March 2010)

1. **R.R.Rosa**, F.M.Ramos, C.A.Caretta, H.F.Campos Velho,
   Extreme event dynamics in the formation of galaxy-sized dark matter structures
   Computer Physics Communications, 180, 621 – 624, 2009.

2. T.B.Veronese, **R.R.Rosa**, N.L.Vijaykumar, M.J.A.Bolzan
   Generalized numerical lattices for time series representation in complex systems
   Journal of Computational Interdisciplinary Sciences, 1(2), 175-184, 2009.

3. C.A.Caretta, **R.R.Rosa**, H.F.Campos Velho, F.M.Ramos, M.Makler
   Evidence of turbulence-like universality in the formation of galaxy-sized dark matter haloes, **Astronomy & Astrophysics**, 487, 445-451, 2008.

4. **R.R.Rosa** et al. *Gradient pattern analysis of short solar radio bursts*
   Advances in Space Research, 42, 844 – 851, 2008.

5. L.F.Faria, N.D.A. Mascarenhas, C.E.Moron, J.H.Saito, **R.R.Rosa**, H.S.Sawant
   A Parallel Application for 3D Reconstruction of Coronal Loops using Image Morphing
   Image and Vision Computing, 25(1), 95-102, 2007.

6. A.P.A.Andrade, A.L.B.Ribeiro, **R.R.Rosa**
   Gradient pattern analysis of cosmic structure formation: norm and phase statistics
   Physica D, 223, 139-145, 2006.

7. A.C.L.Chian, E.L.Rempel, E.E.N.Macau, **R.R.Rosa**, F.Christiansen,
   High-dimensional interior crisis in Kuramoto-Sivashinsky equation
   Physical Review E, 65, 143 – 147, 2002.

8. F.M.Ramos, **R.R.Rosa**, C.Rodrigues Neto, M.J.A.Bolzan, L.D.Abreu Sá
   Generalized thermostatistics description of probability densities of turbulent temperature fluctuations, **Computer Physics Communications**, 147, 556 – 558, 2002.

9. **R.R.Rosa**, A.S.Sharma, J.A.Valdivia
   Characterization of Asymmetric Fragmentation Patterns in Spatially Extended Systems, **International Journal of Modern Physics C**, 10, 147 – 163, 1999.

10. H.S.Sawant, **R.R.Rosa**, J.R.Cecatto, N.Gopalwasmy
    Solar Simple Bursts Observed with High Spectral Resolution
    The Astrophysical Journal. Supplement Series, 90, 693-696, 1994.