

Urbano França

Curriculum Vitae

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Personal Information

Citizenship: Brazilian

Phones

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Contact Information

Instituto de Física Corpuscular

CSIC - Universidad de Valencia

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RESEARCH INTERESTS

Cosmology, Astroparticle Physics, and Theoretical Astrophysics

EDUCATION

Ph.D. - Physics, Spring 2010 (Expected)

Universidad de Valencia, Spain

Diploma de Estudios Avanzados (Coursework and Master Thesis): Nov 2007

SISSA - Scuola Internazionale Superiori di Studi Avanzati, Trieste, Italy

(qualified, transferred to the University of Valencia)

November 2004 to October 2005

Master of Science - Physics, 2004

Instituto de Física Teórica, UNESP, Brazil

Bachelor of Science - Physics, 2002

Instituto de Física, Universidade de São Paulo (USP), Brazil

ACADEMIC EXPERIENCE

Harvard-Smithsonian Center for Astrophysics, USA

Visiting Scholar (Sep to Dec 2009 & Feb to Jun 2010)

Research in cosmology and theoretical astrophysics, especially 21-cm cosmology, in collaboration with Prof. A. Loeb and Dr. J. Pritchard.

Instituto de Física Corpuscular (CSIC/Universidad de Valencia), Spain

PhD Student (Nov 2005 - Present)

Advisor: Dr. Sergio Pastor

Research in cosmology and astroparticle physics, especially the role of neutrinos in the cosmological evolution, under the supervision of Dr. S. Pastor, and Ph.D. level coursework.

SISSA - Scuola Internazionale Superiori di Studi Avanzati, Trieste, Italy

PhD Student (Nov 2004 - Oct 2005)

Research in cosmology and the relation between the dark energy field and the curvature of the universe, and Ph.D. level coursework.

Instituto de Física Teórica, UNESP, Brazil

Master student (Mar 2002 - Mar 2004)

Dissertation: Phenomenology of Cosmological Models with Exponential Scalar Fields (in Portuguese). Advisor: Prof. R. Rosenfeld

Research in models of dark energy, under the supervision of Prof. R. Rosenfeld.

- ACADEMIC EXPERIENCE** (cont.) **Instituto de Física Teórica, UNESP, Brazil**
Undergraduate research project (Nov 2000 - Dec 2001)
Advisor: Prof. R. Rosenfeld
Research in quintessence models with exponential potentials, under the supervision of Prof. R. Rosenfeld.
- PROFESSIONAL SERVICE** **Referee:** Physics Letters B (since 2007), Europhysics Letters (since 2006)
- Conference Organization**
- Scientific Secretary of the "ISAPP School - Probing the Universe with Neutrinos", Valencia, Spain (July 16 - 26 2008)
- Co-organizer of the "XXV Congresso Paulo Leal Ferreira de Física Teórica", São Paulo, SP, Brazil (October 09 - 11 2002).
- Teaching Assistance** - Undergraduate Courses
Instituto de Astronomia e Geofísica, USP (IAG-USP), Brazil.
Introduction to Cosmology - First semester 2003 & 2002
- CONFERENCES AND SCHOOLS** (selected) **With Research Presentation (selected)**
- (Poster) "Model independent constraints on mass-varying neutrino scenarios". A Decade of Dark Energy. STScl, Baltimore, USA (May, 5 - 8, 2008)
- (Talk) "Dark Energy and Neutrino Mass". Origins of Dark Energy. McMaster Univ./Perimeter Institute, Canada (May, 14 - 20, 2007)
- Attended (selected)**
- 21-cm Cosmology. Harvard University, Boston, USA (May, 12-15, 2008)
- The Path to Neutrino Mass. University of Aarhus, Aarhus, Denmark (Sept, 03 - 06, 2007)
- Strings vs Cosmology. Universidad Autónoma de Madrid, Madrid, Spain (Nov, 16 - 17, 2006)
- Neutrinos in Physics, Astrophysics and Cosmology. International School on Astroparticle Physics 2006, Munich, Germany (May, 23 - 31, 2006)
- European Dark Energy Network (EDEN) in Paris. LPNHE, Paris, France (Dec, 7 - 9, 2005)
- OTHER RELEVANT INFORMATION** **Languages:** Portuguese (native), English (fluent), Spanish (fluent).

ACADEMIC
REFERENCES Prof. Julien Lesgourgues - Julien.Lesgourgues@cern.ch
CERN - Theory Division & Institut de Physique Théorique, EPFL, Switzerland
Phone: +41(0)22-767-28-24 & +41(0)21-693-05-61

Dr. Sergio Pastor - sergio.pastor@ific.uv.es
Instituto de Física Corpuscular (CSIC-Universidad de Valencia), Spain
Phone: +34-963-543-510

Prof. Rogerio Rosenfeld - rosenfel@ift.unesp.br
Instituto de Física Teórica, Unesp, Brazil
Phone: +55-11-3393-7812

PUBLICATIONS **Journals**

França, U., Lattanzi, M., Lesgourgues, J. & Pastor, S. 2009, "Model independent constraints on mass-varying neutrinos models", Physical Review D 80, 083506

França, U. 2006, "Dark energy, curvature, and cosmic coincidence", Physics Letters B 641, 351

França, U. & Rosenfeld, R. 2004, "Age constraints and fine tuning in variable-mass particle models", Physical Review D 69, 063517

França, U. & Rosenfeld, R. 2002, "Fine tuning in quintessence models with exponential potentials", JHEP 0210, 015

In preparation

França, U., Pritchard, J. & Loeb, A., Dark matter and 21-cm cosmology

França, U., Dynamical analysis of coupled fluids in cosmology

Pallazzo, A., Lattanzi, M., França, U., Mangano, G., Miele, G., Moura, C., Pastor, S. & Pisanti, O., Low reheating scenarios and neutrinos

Proceedings

França, U. & Rosenfeld, R. 2006, "Variable-Mass Dark Matter and the Age of the Universe", in High Energy Physics: Proceedings of the Fifth Latin American Symposium, edited by C. J. Solano Salinas, O. Pereyra Ravinez, R. Ochoa Jimenez. World Scientific

França, U. & Rosenfeld, R. 2002, "Quintessence models with exponential potentials", Proceedings of XXIII Brazilian National Meeting on Physics of Particles and Fields, Brazilian Physical Society, electronic publication.

Other

XXV Congresso Paulo Leal Ferreira (in Portuguese), Edited by A. Doff, U. França and C. A. M. de Melo, Ed. Livraria da Física, São Paulo, Brazil (2004), ISBN 8588325217.