

Costantino Sigismondi, PhD

(h) Via Sesto Celere 6 - 00152 Roma Italia

sigismondi@icra.it

(o) IIS Federico Caffè Via Fonteiana 111 - 00152 Roma
+393200759463



CURRICULUM VITAE ET STUDIORUM

Current position:

ICRA International Center for Relativistic Astrophysics, Research & Teaching Staff
1994-present

Professor of Physics in Italian High School system, 2002-present

Previous: 2011-2014: Pesquisador Visitante **Observatorio Nacional/MCTI Rio de Janeiro**
2007-2011 Research Staff at **Nice University/Observatoire de la Côte d'Azur**,
Visiting Scientist at **IRSOL** Istituto di Ricerche Solari di Locarno and **IAP/Institute de**
Astrophysique de Paris

2000-02, 2006, 2010 and 2014 Visiting Scientist **Yale Astronomy Dept.**

1. Academic and Scientific Qualifications:

- Qualification of Maître de Conference in Epistemology-History of Science (Ministry of Superior Education and Research, 01/02/2013 13272247850 France 2013)
- Qualification of Maître de Conference in Astronomy/Astrophysics (Ministry of Superior Education and Research, 15/02/2013 13234247850 France 2013)
- Member of the IRAP-PhD board (Solar Astrometry)
- **International PhD in Relativistic Astrophysics** (Nice-Sophia Antipolis University 2011 on High precision ground-based measurements of solar diameter in support of the PICARD mission. Directors Jean Arnaud, Marianne Faurobert and Alberto Egidi.
- **PhD in Theoretical Physics** (Sapienza University of Rome 1998 on Large scale structure formation and neutrino cosmology. Director Remo Ruffini)
- Master degree in Physics (Sapienza University of Rome 1994, thesis in X-ray astronomy of clusters of galaxies. Director Giuseppe Cesare Perola)
- Licence in Theology (Pontificia Univeristas Lateranensis 1998, thesis in Astronomy in the Gospels Director Romano Penna) Specialization in Sindonology (Pontificio Ateneo Regina Apostolorum 2012)

2. Grants and Awards:

- Giuseppe Kirner (Ministry of Education) and Enrico Persico (Accademia dei Lincei) awards 1989-1994
- PhD fellowship (Sapienza University of Rome) 1994-1998
- ICRA research grant 1998-2000 on large scale structure formation
- Osservatorio Astronomico di Roma and Yale University research grant 2000-2002 on Solar astrometry with eclipses and Solar Disk Sextant
- Sapienza University of Rome research grant 2001-2002 on Fermions in the expanding universe
- Foreign Affair Ministry and Sejong University (Seoul SK) 2005 on Solar astrometry
- Vinci grant for International PhD Franco-Italian University 2007-2011

- Galileo medal of Accademia Patavina in 2009 for History of Astronomy
- FAPERJ research grant for Solar astrometry ON/MCTI Rio de Janeiro 2011-2012
- CNPq research grant for Solar astrometry ON/MCTI Rio de Janeiro 2011-2014
- 7 Unicredit bank grants for Gerbertus journal and annual meeting 2010-2016

3. Research projects

- Large scale structure formation in the expanding Universe (1998-2002) Sapienza Univ.
- Solar astrometry with eclipses and Solar Disk Sextant (2000-2010) Yale University
- Solar astrometry with historical eclipses and planetary transits Sejong University (2005)
- Solar astrometry with ground-based instruments (2007-2011) Nice University and Observatoire de la Côte d’Azur
- VENUSTEX with Observatoire de la Côte d’Azur and Huairou Solar Observing Station (China) 2012
- Solar astrometry with 2016 Mercury transit (ON/MCTI and IOTA/ES and US)
- Solar astrometry with Rio de Janeiro Astrolabe ON/MCTI 2011
- Solar astrometry with Rio de Janeiro Heliometer ON/MCTI and CBPF/MCTI 2012-2013
- Didactics of Astronomy 1987-2013 Liceo Scientifico G.B. Morgagni Roma
- Solar astronomy with pinholes 2002-13 Basilica S. Maria degli Angeli and Sapienza Univ.
- Gerbert of Aurillac 2002-2013
- Cassini and Clavius centennials 2012
- Galileo, Kepler and heliometry 2000-2002

4. Research interests

Solar astrometry and secular variability

Variable stars

History of astronomy and cosmology

Gravitation and General Relativity

Oceanography and wave mechanics

5. Organizations of international symposia and acta publication

- First William Fairbank Workshop Pescara 1998
- Clavius fourth centennial meeting and XXXI ESOP Pescara 2012
- Gerbert of Aurillac millennium meeting and 15 annual meetings: Rome 2003-2017
- Founder and editor of GERBERTVS, International Academic Publication on History of Medieval Science (ISSN 2038-355X) www.icra.it/gerbertus “gerb” on NASA/ADS

6. Teaching experience: Universities and High Schools

- Sapienza University of Rome 2002-2009: History of Astronomy and Earth in the Solar System 2002-present Solar Physics Laboratory (in collaboration with Paolo De Bernardis)
- University Campus Biomedico of Rome 2004-2007: Statistics
- Regina Apostolorum University 2007-present History and Philosophy of Astronomy
- Universidade Federal do Rio de Janeiro, Observatorio do Valongo: Contract Professor of Astronomy for 2014-2015
- Observatorio Nacional, Rio de Janeiro: Solar Astrometry
- Liceo G. B. Morgagni, Rome 1987- present: Astronomy
- ITIS Galileo Ferraris, Alessandro Volta and Giuseppe Armellini, Rome 2002- present: Physics

7. Presentations

Presentations to International Conferences: Marcel Grossmann Meeting on General Relativity (1997 to 2015), invited speaker to Galileo-Xu Meetings, Italo-Korean Meetings (from 1995), ICRANet Meetings, Paris-Observatory History of Astronomy Meetings, Korean History of Astronomy (2009 and 2012) Gerbert of Aurillac, CBPF and ESOP Meetings. Italian Embassy in the United States of America and in Korea In total 90 talks from 1995 to present held in the five continents, as invited speaker.

8. Papers and reviews

There are 218 publications on [NASA ADS archive](#) on February 25 2017; among them:

- A. Raponi, C. Sigismondi, et al., The Measurement of Solar Diameter and Limb Darkening Function with the Eclipse Observations, **Solar Physics** (2012);
- C. Sigismondi, Guidelines for measuring solar radius with Baily beads analysis, **Science in China G** 52, 1773 (2009);
- C. Sigismondi, et al., Atlas of Baily Beads 2005-2008, **Solar Physics** 258, 191 (2009);
- Kilcik, C.Sigismondi, et al., Solar Radius Determination from Total Solar Eclipse of March, 29 2006, **Solar Physics** 257, 237 (2009);
- C. Sigismondi, Measuring the solar angular diameter using two pinholes, **Am. J. Phys.** 70 1157 (2002);
- C. Sigismondi, Gerberto e la misura delle canne d'organo, **Archivum Bobiense** 29, 355-396 (2007);
- C. Sigismondi, Long Waves Perturbations to Astronomical Tides in Adriatic and Tyrrhenian Sea, **AIPC** 966, 333-340 (2008);
- C. Sigismondi, Correlations of successive maxima in Mira, Chi Cygni, R Leonis and R Hydrae **JAAVSO** 32,34 (2004);
- C. Sigismondi, D. Hoffleit and R. Coccioli, Long term behavior of Mira Ceti maxima, **JAAVSO** 30, 31 (2001).
- **Referee** for The Astrophysical Journal, General Relativity and Gravitation, Revista Brasileira de Geofisica and Science in China.

9. Edited volumes and books (10): a selection

- R. Ruffini & C. Sigismondi, Nonlinear Gravitodynamics, World Scientific, Singapore 2003
- C. Sigismondi, Meridiani e Longitudini a Roma, Sapienza Università di Roma 2006
- C. Sigismondi, La Sfera da Gerberto al Sacrobosco, UPRA, Roma 2008
- C. Sigismondi, Effemeridi: Introduzione al calcolo astronomico, UPRA, Roma 2008
- C. Sigismondi, Astronomia di posizione per muoni, UPRA, Roma 2009
- AAVV GERBERTVS volumes 1-10 (2010-2017) www.icra.it/gerbertus

10. Submitted papers PAU meteor shower dynamics and its cometary origin, to MNRAS

11. Languages Italian, English, French and Portuguese, fluent.

12. Memberships

International Astronomical Union, American Physical Society, Italian Society of Physics, AAVSO American Association of Variable Stars Observers, IMO International Meteor Organization, ICRA International Center for Relativistic Astrophysics, IOTA, International Occultation Timing Association, ODR Online Dispute Resolution – Latinoamerica.

13. International Partnerships: ON Observatorio Nacional; IRSOL Istituto Ricerche Solari di Locarno; Yale University; Institute d'Astrophysique de Paris, UNice, ICRANet.