

# Stefano Borgani

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## Personal data

Place and date of birth: Terni – Italy; 13/11/1964

Nationality: Italian

## Education

**1992 Ph.D.** in Astronomy; International School for Advanced Studies (SISSA-ISAS), Trieste, Italy;  
Advisor: Prof. G.F.R. Ellis

**1990 Master** in Astrophysics; International School for Advanced Studies (SISSA-ISAS), Trieste, Italy;  
Advisor: Prof. G.F.R. Ellis

**1988 Graduation** in Physics; Department of Physics, University of Perugia, Italy; Advisor: Prof. S.A. Bonometto

## Positions

**Since January 2013:** Full Professor, Department of Physics, University of Trieste, Trieste (Italy)

**January 2010-December 2012:** Associate Professor, Department of Physics, University of Trieste, Trieste (Italy)

**2002-2009:** Associate Professor, Department of Astronomy, University of Trieste, Trieste (Italy)

**1991-2002:** staff researcher at the National Institute of Nuclear Physics, Perugia (Italy)

**1992-1995:** research associate, International School for Advanced Studies (SISSA), Trieste (Italy)

**July 1993:** visiting scientist at the Department of Astronomy – Queen Mary & Westfield College

**June-July 1996:** visiting scientist at the Department of Physics and Astronomy, University of California Santa Cruz (USA)

**January-February 2000:** visiting scientist at the European Southern Observatory (ESO, Garching, Germany)

**August 2017:** visiting scientist at the Tuorla Astronomical Observatory (Turku, Finland)

## Research Interests

Theoretical cosmology: formation of large-scale structure in the Universe; formation and properties of galaxies and galaxy clusters; large supercomputer simulations of cosmic structure formation; statistical properties of the large-scale galaxy distribution; high-energy physics motivated models of Dark Matter.

## Scientific activity (as of Aug 2017)

- Author of 226 articles on refereed journal (41 as first author), among which seven review articles published in Physics Reports, Nature, two in Annual Review of Astronomy and Astrophysics, Space Science Review and Advanced Science Letters
- Total citation number: 13.620
- “H index” of 62

- Above 50 invited talks at Conferences and Schools
- About 50 invited colloquia at different Institutes
- PI of 5 Key Projects and of about 15 Standard Projects approved for allocation of supercomputing time at CINECA

## **Professional Service**

- Director of INAF – Astronomical Observatory of Trieste (since December 2011)
- Deputy Director of the Department of Astronomy – University of Trieste (2004-2007)
- Italian representative in the Steering Committee of the ASTROSIM (Simulations in Astrophysics) Network, funded by the European Science Foundation, 2006-2011.
- Coordinator of the Organization Unit LE3 within the Science Ground Segment for the EUCLID mission (October 2010-April 2014)
- Member of the steering committee (“Giunta”) of the Inter-dipartimental Centre for Computational Science (CISC) at the University of Trieste (2004-2013).
- Chair of the organization of about 10 Conferences
- Member of the Scientific Organizing Committee of above 30 conferences
- Member of the INAF-CINECA Scientific Committee in the period 2001-2005.
- Member of the INAF-CINECA Steering Committee in the period 2005-2010.
- Coordinator of the Workpackage on “Theory of Cosmic Structure Formation” within the “Cosmology Study” of the Italian Space Agency (2006-2009).
- Member of the “Astrophysics” Working Group of the Italian Space Agency (since February 2016).

## **Evaluation of research**

- Referee for The Astrophysical Journal, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, Nature, Physical Review B, Physical Review Letters, Review of Modern Physics.
- Member of the Chandra Peer Review Panel (cycle A03) and of the XMM Peer Review Panel (cycle A03 and A04).
- Member of the Theory/Simulations Panel for the “High-Energy Astrophysics Study” of the Italian Space Agency (2006-2008).
- Member of the Data Analysis Panel for the Cosmic Structure Formation Study of the Italian Space Agency (2006-2009).
- Referee for several national funding agencies (Netherland, France, Germany, USA, Israel, Saudi Arabia).
- Referee for assignment of Tenured Professor Positions for Michigan State University, University of Southern California and University of Alabama (Huntsville).
- Referee for PRIN-MIUR/2005 and PRIN-MIUR/2008 projects.
- Referee for “Comitato di Indirizzo per la Valutazione della Ricerca” (CIVR).
- Referee for FP7 and H2020 ERC Grants
- Referee for supercomputing projects within the “Partnership for Advanced Computing in Europe” (PRACE).
- Referee for “Agenzia Nazionale per la Valutazione dell’Università e della Ricerca” (ANVUR).
- Member of the evaluation panel for the Heidelberg Institute for Theoretical Studies (HITS; July 2017)
- Referee for research project submitted to “Lazio Innova” (2017)
- Member of the Scientific User Selection Panel for the EC HPC-Europe3 program (since Sept.

2017)

## **Grants**

- Local coordinator of the INFN FA21 project in “Commissione IV INFN” (1991-1999)
- Local coordinator of the INFN PD21 project in “Commissione IV INFN” (2000-2012)
- National coordinator of the PRIN-INAF 2006 project “Observing and Modelling the Properties of Diffuse Baryons in Clusters of Galaxies”.
- National coordinator of the PRIN-MIUR 2007 project “The Cosmic Cycle of Baryons”.
- Coordinator of the node in Trieste for the COSMOCOMP International Training Network, funded by the EC within the Framework Program 7.
- Coordinator of the node in Trieste for the LACEGAL “Inter-Regional Staff Exchange Scheme” Network, funded by the EC within the Framework Program 7.
- National coordinator of the PRIN-MIUR 2009 project “Tracing the growth of structures in the Universe: from the high-redshift cosmic web to galaxy clusters”.
- National coordinator of the PRIN-MIUR 2012 project “Evolution of cosmic baryons: astrophysical effects and cosmic growth”.
- Local coordinator of the PRIN-MIUR 2015 project “Cosmology and Fundamental Physics: illuminating the Dark Universe with Euclid”.

## **Supervision and evaluation of students**

- Supervisor for the Graduation Thesis of 4 students
- Supervisor of 15 Master students
- Supervisor of 13 PhD students
- Member of committees for above 10 PhD final exams in Italy, Spain, Denmark and UK.

## **Teaching activity**

- Course of “Cosmology” for the graduation in Physics at the University of Perugia (from AY 1991/92 until AY 1997/98)
- Course of “Formation of Cosmic Structures” for the PhD in Physics at the University of Trieste (since AY 2000/2001)
- Course of “Physics of Galaxies” for the graduation in Physics (AY 2001/02)
- Course of “Galaxies and Systems of Galaxies for the Master degree in Astrophysics at the University of Trieste (from AY 2002/03 to AY 2009-2010)
- Course of “Numerical Methods for Astrophysics” for the Master degree in Astrophysics at the University of Trieste (from AY 2002/03 to AY 2009-2010)
- Course of “Cosmology-II” for the Master degree in Physics at the University of Trieste (since AY 2011-2012)
- Course of “Physics-I” for the “Laurea Triennale” in Chemistry at the University of Trieste (AY 2013/14 and 2014/15)
- Course of “General Physics” for the “Laurea Triennale” in Earth Sciences at the University of Trieste (AY 2015/16)
- Course of “Formation of Cosmic Structures” for the PhD degree in Astroparticle Physics at SISSA in Trieste (from AY 2008/09 to 2010/2011)
- Visiting professor at the University of Ljubljana – Teacher of the “Astronomy II” course (May 2017)