

Stefano Borgani

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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

June 2010: qualification for a full professorship

2010-present: 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)

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

- Author of about 150 articles on refereed journal (about 40 as first author), among which five review articles published in Physics Reports, Nature, Annual Review of Astronomy and Astrophysics, Space Science Review and Advanced Science Letters
- “H index” of 47
- About 50 invited talks at Conferences and Schools
- About 50 invited colloquia at different Institutes
- PI of 4 Key Projects and of about 10 Standard Projects approved for allocation of supercomputing time at CINECA

Professional Service

- Deputy Director of the Department of Astronomy – University of Trieste (2004-2007)
- Chair of the organization of 5 Conferences
- Member of the Scientific Organizing Committee of 21 conferences
- Member of the INAF-CINECA Scientific Committee in the period 2001-2005.
- Member of the INAF-CINECA Steering Committee since 2005.
- Coordinator of the Workpackage on “Theory of Cosmic Structure Formation” within the “Cosmology Study” of the Italian Space Agency (2006-2009).
- Member of the steering committee (“Giunta”) of the Inter-dipartimental Centre for Computational Science (CISC) at the University of Trieste.

- Italian representative in the Steering Committee of the ASTROSIM (Simulations in Astrophysics) Network, founded by the European Science Foundation, 2006-2011.
- Coordinator of the Organization Unit LE3 within the Science Ground Segment for the EUCLID mission.

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 the Nederlandse Organisatie voor Wetenschappelijk Onderzoek.
- Referee for the US–Israel Binational Science Foundation.
- Referee for the McArthur Foundation.
- Referee for assignment of Tenured 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 EC-FP7 “Advanced Grant” project.
- Referee for supercomputing projects within the “Partnership for Advanced Computing in Europe” (PRACE).

Grants

- Local coordinator of the INFN FA21 project in Astroparticle Physics (1991-1999)
- Local coordinator of the INFN PD21 project in Astroparticle Physics (since 2000)
- 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 European Community within the Framework Program 7.
- Coordinator of the node in Trieste for the LACEGAL IRSES project, funded by the European Community 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”.

Supervision and evaluation of students

- Supervisor for the Graduation Thesis of 4 students
- Supervisor of 13 Master students
- Supervisor of 9 PhD students
- Member of committees for about 10 PhD final exams in Italy, Spain, Denmark and UK.

Activity in education/outreach

- 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 “Formation of Cosmic Structures” for the PhD degree in Astroparticle Physics at SISSA in Trieste (since AY 2008/09)
- Speaker at four public talks for amateur astronomers and high school students