

Martina Gerbino

Ph.D.

+46855378075

✉ marti.gerbino@gmail.com

🌐 <http://www.su.se/profiles/mgerb>

Current position

Fall 2015 – Present Postdoc at the Oskar Klein Centre for Cosmoparticle Physics, Stockholm University

Reserach Interests

Brief description I am a theoretical cosmologists, working at the interface between data analysis and theory. I test fundamental physics theories against cosmological data. My main focus is on neutrino cosmology. I am also interested in investigating and modeling the impact of experimental systematics on cosmological parameters.

Key-words Cosmic Microwave Background, Neutrino physics, Early Universe, Large Scale Structures, Data analysis, Systematics, Bayesian Inference, Model comparison.

Education

- 2013 – 2015 PhD in Physics, University of Rome “Sapienza”,
Thesis: Current and future constraints on fundamental physics in light of the results from the Planck satellite, final mark: cum laude
Thesis Supervisor: Prof. Alessandro Melchiorri, Co-supervisor: Dr. Luca Pagano
- 2010 – 2012 Master’s Degree in Astronomy and Astrophysics, University of Rome “Sapienza”,
final mark: 110/110 cum laude
- 2007 – 2010 Bachelor’s Degree in Physics, University of Rome “Sapienza”
final mark: 110/110 cum laude

Collaboration memberships

- 2017 – Present Member of the Simons Observatory collaboration
- 2015 – Present Member of the Cosmological Parameter and Simulations working groups, CORe experiment proposal
- 2013 – Present Member of the Planck-LFI Core Team

Invited talks

- 1 Invisibles2017 Workshop, Zurich, CH, 12-16 Jul 2017, *Massive neutrinos in cosmology*, senior talk
- 2 COSMO-16, Ann Arbor, MI-USA, 8-12 Aug 2016, *Neutrinos in cosmology: an overview*, plenary talk
- 3 Neutrinos and light particles in cosmology, Berkeley CCP, USA, 22-24 Jun 2016, *Constraints on neutrino masses from cosmology and laboratory experiments*
- 4 9th LHC Days in Split, held in Split, Croatia, 29 Sep-4 Oct 2014, *Constraining Fundamental Physics with Planck*

Additional research experiences

Feb-Jun 2017 Long term visit at the University of Michigan, Ann Arbor, MI-USA

- May-Jun 2015 Long term visit at Kavli Institute for Cosmological Physics (KICP), Chicago, IL-USA, host Prof. E.W.Kolb.
- Jul-Sep 2011 Internship at NASA Goddard Space Flight Center (MD), resulting in the following work: Sakamoto, Gerbino, Cummings, *Classifying the X-ray Afterglow Light Curves Based on the Pulse Structure of the GRB Prompt Emission*, presented at the "Time Domain Astrophysics with Swift" conference, Clemson, SC, October 24-26, 2011

Additional professional activities

Reviewer for Physics Review D (PRD) journal

Member of the OKC colloquium committee

Coordinator of the "Cosmology and Gravity" working group at the OKC

Reviewer for NASA Experimental Program to Stimulate Competitive Research (EPSCoR), 2017

Organization of conferences and workshops

- 1 Organiser of the Nordita program "Advances in Theoretical Cosmology in Light of Data", Stockholm, Sweden, 4-29 Jul 2017
- 2 Convener of the "Cosmology" parallel track of the TeV Particle Astrophysics (TeVPA) conference, Columbus, OH-USA, 7-11 Aug 2017

Teaching activities

- 2014 Preparatory courses for Mathematics Bachelor's
- 2013 – 2014 Tutor of the course 'Mechanics' for Physics Bachelor's
- 2013 – 2014 Tutor of the course 'Physics I' for Mathematics Bachelor's

Outreach and non-academic experiences

Coordinator of the "Education and Public Outreach" working group for the Simons Observatory collaboration

Examiner during the admittance tests into the University College 'Lamaro-Pozzani', Rome, since the academic year 2012-2013

Contributed author of Semplici S (a cura di), *Italia No, Italia Forse, Perché i talenti fuggono e qualche volta ritornano*, Editrice La Scuola, ISBN 9788835036234

Honors and awards

- 2014 Grant for young researchers provided by University of Rome "Sapienza"
- 2012 Course for outstanding students, Master's Course in Astronomy and Astrophysics, University of Rome "Sapienza"
- 2008 – 2010 Course for outstanding students, Bachelor's Course in Physics, University of Rome "Sapienza"
- 2007 – 2012 Student at the University College 'Lamaro-Pozzani', Rome

Languages

Italian (Mother tongue), English (Fluent), Swedish (Beginner)