

Stefano CAMERA

Associate Professor, University of Turin, Turin, Italy

Visiting Professor, University of the Western Cape, Cape Town, South Africa



Personal Information

Birth
Nationality
Address

Education

Degree	PhD Physics & Astrophysics
Institute	Università degli Studi di Torino, Italy
Period	2008 – 2010
Supervisor(s)	Prof. A. Diaferio (Università degli Studi di Torino) / Prof. A.F. Heavens (The University of Edinburgh)
Thesis	Testing Alternative Cosmological Models with Cosmic Shear
Degree	Laurea Magistrale in Fisica delle Interazione Fondamentali (MPhys)
Institute	Università degli Studi di Torino, Italy
Period	2005 – 2007
Supervisor	Prof. A. Diaferio (Università degli Studi di Torino)
Thesis	Large-Scale Structure Formation in Modified Gravity Theories
Degree	Laurea in Fisica (BSc Physics)
Institute	Università degli Studi di Torino, Italy
Period	2002 – 2005
Supervisor	Prof. G. Magnano (Università degli Studi di Torino)
Thesis	Eddingtonland: On Einstein's General Relativity and the Geometry of Eddington's Sheet in Schwarzschild's Solutions – a Physical-Geometrical Essay

Work Experience

Institute	Dipartimento di Fisica, Università degli Studi di Torino, Italy
Position	Associate Professor
Period	1 st Mar 2020 (permanent)
Institute	Dipartimento di Fisica, Università degli Studi di Torino, Italy
Position	Rita Levi Montalcini Assistant Professor
Period	1 st Mar 2017 – 29 th Feb 2020
Project	PROMETHEUS – Probing and Relating Observables with Multi-wavelength Experiments To Help Enlightening the Universe's Structure
Institute	JBCA, School of Physics & Astronomy, The University of Manchester, UK
Position	Research Associate in Theoretical & Observational Cosmology
Period	1 st Nov 2014 – 28 th Feb 2017
Project	Enlightening the Dark Universe with Optical-Radio Synergies
Line Manager	Prof. Michael L. Brown
Institute	CENTRA, Instituto Superior Técnico, Universidade de Lisboa, Portugal
Position	FCT Research Fellow
Period	1 st Jan 2012 – 31 st Oct 2014
Project	Cosmology with Weak Lensing and Radio Continuum Surveys
Line Manager	Prof. Mário G. Santos

Institute	CENTRA, Instituto Superior Técnico, Universidade Técnica de Lisboa, Portugal
Position	Research Assistant
Period	1 st July 2011 – 31 st Dec 2011
Project	On the Pathway to SKA: science with next generation of radio telescopes
Line Manager	Prof. Mário G. Santos

Institute	Dipartimenti di Fisica Generale e Teorica, Università degli Studi di Torino, Italy
Position	Researcher Assistant
Period	1 st Jan 2011 – 30 th June 2011
Project	Alternative Theories of Gravity
Line Manager	Prof. Nicolao Fornengo

Fellowships & Awards

- Rita Levi Montalcini Fellowship, MIUR – Ministero dell'Istruzione, dell'Università e della Ricerca (Italy)
Project: 'PROMETHEUS – Probing and Relating Observables with Multi-wavelength Experiments To Help Enlightening the Universe's Structure'
- Marie Skłodowska-Curie Fellowship, MSCA COFUND AstroFit2 Programme
Project: 'ICARUS – Intertwining Cosmology and Astrophysics to Reveal the Universe's Secrets'
- Post-Doctoral Research Fellowship, FCT – Fundação para a Ciência e a Tecnologia (Portugal)
SFRH/BPD/80274/2011: 'Cosmology with Weak Lensing and Radio Continuum Surveys'
- Nominee, Premio Giovani Laureati 2011 Award, Società Italiana di Fisica (Italy)

Major Scientific & Academic Achievements

171 publications (45 under peer review), of which 30 as a 1st author and:

- 3 (2 lead-author) letters on Physical Review Letters (IF 2020: 9.161)
- 3 (1 lead- and 1 co-lead author) letters on The Astrophysical Journal Letters (IF 2020: 7.413)
- 1 lead-author letter on Monthly Notices of the Royal Astronomical Society: Letters (IF 2019: 5.356)
- 2 corresponding author reviews on Living Reviews in Relativity (IF 2019: 35.429)
- 1 lead-author review (accepted) on Physics Reports (IF 2018: 28.295)
- 7 (1 lead- and 2 co-lead author) chapters in the Square Kilometre Array White Book

Leading roles in international collaborations:

- Euclid [Theory, Galaxy Clustering, and Weak Lensing Science Working Groups (SWGs)]
 - 'Euclid Builder' status within Euclid Consortium [2022]
 - Coordinator, 'Photo-z Clustering' Work Package, Galaxy Clustering SWG [2019–]
 - Coordinator, 'Dark Matter & Particle Cosmology' Work Package, Theory SWG [2012–2022]
 - Coordinator, Work Package 9, Theory-Simulations Joint SWG [2013]
 - Member, Theory WG Editorial Board
 - Member, Euclid Consortium Diversity Committee
 - Winner, Euclid Consortium Logo Competition
- SKA Observatory (SKAO), Cosmology SWG
 - Chair, Cosmology SWG [2020–2024]
 - Coordinator, 'Cosmology on the Largest Scales' Science Case, Cosmology SWG
 - Coordinator, 'Synergies' Focus Group, Cosmology SWG
- MeerKAT Large-Area Sky Survey (MeerKLASS), Core Member, Member of Advisory Board
- Evolutionary Map of the Universe (EMU), Cosmology SWG
- Low Frequency ARray (LOFAR), Surveys Key Science Project

Long-term and major collaborators (full list of referees available in Annex A):

- Prof. R. Maartens (Head of Astrophysics, University of the Western Cape, South Africa)
- Prof. M.G. Santos (University of the Western Cape, South Africa)
- Prof. R. Durrer (University of Geneva, Switzerland)
- Prof. C. Clarkson (Queen Mary University of London, UK)
- Prof. N. Fornengo (Università degli Studi di Torino, Italy)

Publication metrics:

- h index 34 (ADS)
- ~5800 citations
- 1 paper w/ >1000 citations
- 9 papers w/ ≥100 citations

Seminars and contributions to conferences and workshops:

- >12 Invited Plenary Conference Talks (KASI Korea, BCCP Berkeley, IPMU Tokyo, ICTP Trieste, Lorentz Center Leiden, DESY Hamburg, COSMO21, Cosmology Dubrovnik 2018, ICGC 2019)
- ~30 Invited Conference Talks
- Invited Lecturer, 7th Astrophysics & Gravitation School (Sept 2014, Lisbon, Portugal)
- Invited Discussion Chair, Beyond LCDM Conference (Jan 2015, Oslo, Norway), Fundamental Physics with the SKA (May 2017, Flic-en-Flac, Mauritius)
- >40 invited seminars (Europe, South Africa, Japan, USA)
- >40 public talks in international conferences, workshops and schools
- Chair and Founder, CASTLE (Sept 2018/2021, Tagliolo Monferrato, Italy)
- Chair and Founder, Steering Committee, UniVersum (est. 2017)
- Scientific Organiser, Relativistic Effects in LSS (July 2018, Sexten, Italy)
- Scientific Organiser, Euclid Theory SWG Meeting (May 2014, Marseille, France)
- Scientific Organiser, EWASS Special Session (Apr 2018, Liverpool, UK)
- Local Organiser, IberiCos VIIth (May 2012, Lisbon, Portugal)
- Organiser, JBCA Colloquia, Jodrell Bank Centre for Astrophysics, The University of Manchester

Reviewer's Activity

Peer-reviewed journals:

- Physical Review Letters, APS
- Physical Review D, APS
- Journal of Cosmology and Astroparticle Physics, IOP Science
- Monthly Notices of the Royal Astronomical Society, Oxford University Press
- Classical and Quantum Gravity, IOP Science
- The European Physical Journal C, Springer
- Physics of the Dark Universe, Elsevier
- Galaxies – Open Access Cosmology, Astronomy & Astrophysics Journal, MDPI Open Access Publishing

Research foundations:

- European Research Council
- Ministero dell'Università e della Ricerca, Italy
- French National Research Agency, France
- Netherlands Organisation for Scientific Research, The Netherlands
- National Research Foundation, South Africa

Editorial Activity

- Experimental Results (Cambridge University Press), Chief Editor for Physics & Astronomy
- Frontiers in Physics, Topic Editor
- Advances in Astronomy, Guest Editor
- Euclid Consortium Theory SWG, Editor
- SKA Cosmology SWG, Editor

Funding

- INAF – National Institute for Astrophysics (Italy)
'Paving the way to radio cosmology in the SKA era: synergies between SKAO pathfinders/precursors and the new generation of optical/near-infrared cosmological surveys'
 - PI Prof. S. Camera (Università degli Studi di Torino, Italy)
 - Amount: €80,000.00
- Chinese Scholarship Council (China) 2023
 - Co-I Prof. S. Camera (Università degli Studi di Torino, Italy)
 - Amount: €48,600.00
- Progetti di Rilevante Interesse Nazionale (Italy) 2022
'EXSKALIBUR – Euclid-X-SKA: Likelihood Inference Building for Universe's Research'
 - PI Prof. S. Camera (Università degli Studi di Torino, Italy)

- o Amount: €284,000.00
- International Exchanges Grant no. IES/RS1/180189
'Developing the synergies between Euclid and the SKA'
 - o Co-I Dr Stefano Camera (Università degli Studi di Torino, Italy)
 - o Amount: £15,000.00
- Ministero dell'Istruzione, dell'Università e della Ricerca
'PROMETHEUS – Probing and Relating Observables with Multi-wavelength Experiments To Help Enlightening the Universe's Structure'
 - o PI Dr Stefano Camera (Università degli Studi di Torino, Italy)
 - o Amount: €190,873.66, success rate <8%
- Marie Skłodowska-Curie Actions COFUND AstroFit2 Programme
'ICARUS – Intertwining Cosmology and Astrophysics for Revealing the Universe's Secrets'
 - o PI Dr Stefano Camera (Università degli Studi di Torino, Italy)
 - o Amount: €174,375.00 , success rate <10%
- Fundação para a Ciência e a Tecnologia (Portugal) grant no. PTDC/FIS-AST/2194/2012
'Towards very high-redshift radio galaxies in the reionisation epoch using ALMA'
 - o PI Prof. M.G. Santos (University of the Western Cape, South Africa)
 - o Amount: €109,022, rating: 'outstanding'
- Fundação para a Ciência e a Tecnologia (Portugal) grant no. PTDC/FIS/100170/2008
'Path2SKA@PT – On the Pathway to SKA: Science with next generation radio-telescopes'
 - o PI Prof. M.G. Santos (University of the Western Cape, South Africa)
 - o Amount: €173,000, rating: 'excellent'
- Progetti di Rilevante Interesse Nazionale (Italy) 2010-2012
'Matter-Antimatter asymmetry, dark matter and dark energy in the LHC era'
 - o PI Prof. A. Masiero (Università degli Studi di Padova, Italy)
 - o Amount: €97,500 (only referring to funds to Università degli Studi di Torino, Italy)
- Progetti di Rilevante Interesse Nazionale (Italy) 2008-2009
'Fundamental Constituents of the Universe'
 - o PI Prof. A. Masiero (Università degli Studi di Padova, Italy)
 - o Amount: €95,000 (only referring to funds to Università degli Studi di Torino, Italy)

Teaching

Rôle	Associate Professor
Institute	Università degli Studi di Torino, Italy
Period	First Semester (2022/23)
Course	Cosmology, MPhys

Rôle	Associate Professor
Institute	Università degli Studi di Torino, Italy
Period	Second Semester (2017/18, 2018/19, 2019/20, 2020/21, 2021/22, 2022/23)
Course	Physics Laboratory I, BSc Physics

Rôle	Associate Professor
Institute	Università degli Studi di Torino, Italy
Period	Second Semester (2020/21, 2021/22)
Course	Physics with Laboratory, BSc Natural Sciences

Rôle	Invited Professor of Cosmology
Institute	Instituto Superior Técnico, Universidade de Lisboa, Portugal
Period	Spring Term 2013
Course	Astrophysics, MSc Physical and Technological Engineering

Rôle	Teaching Assistant
Institute	Università degli Studi di Torino, Italy
Period	Spring Term 2011
Course	Physics with Elements of Mathematics, MSc Pharmacy

Rôle	Teaching Assistant
Institute	Università degli Studi di Torino, Italy
Period	Winter Term 2010
Course	Electricity & Magnetism, BSc Mathematics

Rôle	Tutor
Institute	Università degli Studi di Torino, Italy
Period	Spring Term 2010
Course	Physics Laboratory II (Waves, Fluids & Thermodynamics), BSc Physics

Rôle	Tutor
Institute	Università degli Studi di Torino, Italy
Period	Winter Term 2009
Course	Physics Laboratory I (Mechanics & Fundamentals of Statistics), BSc Physics

Rôle	Tutor
Institute	Università degli Studi di Torino, Italy
Period	Spring Term 2009
Course	Physics Laboratory IV (Optics), BSc Physics

Rôle	Tutor
Institute	Università degli Studi di Torino, Italy
Period	Winter Term 2008
Course	Physics Laboratory III (Electricity & Magnetism), BSc Physics

Student Supervisioning & Mentoring

Doctoral theses supervised: F. Montano; J. Han; F. Santucci [co-supervised]; A.M. Rubiola [co-supervised]; S.J. Rossiter; K. Tanidis.

Doctoral theses examined:

- Nikolaos Koukoufilippas, 2023/4 (University of Oxford, UK)
- Maria Berti, 2023 (SISSA Trieste, Italy)
- William L. Matthewson, 2023 (University of Geneva, Switzerland)
- Giovanni Verza, 2022 (Università degli Studi di Padova, Italy)
- Luca Paganin, 2021 (Università degli Studi di Genova, Italy)
- Vasco M. C. Ferreira, 2021 (Universidade do Porto, Portugal)
- Goran Jelic-Cizmek, 2021 (University of Geneva, Switzerland)
- Alessandro Casalino, 2021 (Università degli Studi di Trento, Italy)
- Gunnar Riemenschneider, 2021 (Università degli Studi di Torino, Italy)
- Marco Bonici, 2021 (Università degli Studi di Genova, Italy)
- Miguel Méndez-Isla, 2019 (University of Cape Town, South Africa)
- Riccardo Murgia, 2019 (SISSA Trieste, Italy)
- Teboho Molohi, 2019 (University of Cape Town, South Africa)
- Sheean Jolicoeur, 2019 (University of the Western Cape, South Africa)

Masters' theses supervised: R. Zangarini, 2024; M. Barberi Squarotti, R. Ingrao, F. Montano, 2023; F. Verdese, A. Suriano, 2022; M. Borchellini, N. Dalmaso, S. Sacquegna, 2021; A.M. Rubiola, D. Usseglio, 2020; A. Bonino, G. Berardi, G. Faggioli, 2019; Elena Pinetti, 2018.

Outreach

TEDx speaker (https://youtu.be/_3lQjpSGFqY); Tutor in science centres, museums, CERN Masterclass, and 4 years at Planetarium of Turin (Italy); Radio and television interviews and dedicated programmes; Organiser of the European Research Night in Turin, Italy (more than 5 editions); Seminars in Italy, UK, Portugal, and developer of thematic scientific exhibitions.

Language Skills

Italian (native speaker), English, Portuguese, French, Spanish (beginner).