

PERSONAL INFORMATION

Family, name, first name: Meneghetti, Massimo
ORCID ID: <http://orcid.org/0000-0003-1225-7084>
Date of birth: July 9th, 1974
Nationality: Italian
URL for web site: <http://pico.bo.astro.it/~massimo>; <https://science.jpl.nasa.gov/people/Meneghetti/>
Google Scholar profile: <http://scholar.google.it/citations?user=I-cYt7oAAAAJ&hl=it>

EDUCATION

2003 **PhD**, Department of Astronomy, University of Padova, Italy
1999 **Master**, Department of Astronomy, University of Padova, Italy

CURRENT POSITION(S)

2010 – **Professor (part-time contract)**, University of Bologna, Italy
2006 – **Staff Astronomer**, Astronomical Observatory of Bologna, INAF, Bologna, Italy

PREVIOUS POSITIONS

2013 – 2015 **Senior NPP Fellow**, Jet Propulsion Laboratory, Pasadena, USA
2009 **Visiting professor**, ITA, University of Heidelberg, Germany
2004 – 2006 **Postdoc**, Institute for Theoretical Astrophysics, University of Heidelberg, Germany
2003 – 2004 **Postdoc**, Departments of Physics and Astronomy, University of Padova, Italy

FELLOWSHIPS, GRANTS AND AWARDS

2016 – 2017 Grant **Strategic collaborations between Italy and the US**, Italy, PI
2014 – 2015 Grant **Research Project of National Interest-INAF**, Italy, Co-I, €190K
2013 – 2015 Grant **Research Project of National Interest -MIUR**, Italy, Co-I, €256K
2014 Grant **HST-AR-13915**, US, PI
2013 – 2015 **Senior NPP Fellowship**, NASA Postdoctoral Program (NPP), €160K
2011 – 2012 Grant **Research Project of National Interest -MIUR**, Italy, Co-I, €186K
2010 – 2012 Grant **Research Project of National Interest -INAF**, Italy, PI, €75K
2009 – 2012 **HPC-Europa Fellowship**, High Performance Computing Center Stuttgart, Germany
2011 Grant from the **Italian Space Agency** in support for data analysis, Italy, PI, €18K
2010 **RESCEU/DENET Fellowship**, Department of Physics, University of Tokyo, Japan, €15K
2004 **“Gratton” Prize**, awarded to the best Ph.D. thesis discussed in Italy in the years 2002-2003
2001 – 2002 **EARA Marie Curie Fellowship (2)**, Max-Planck-Institute for Astrophysics, Garching, Germany
1999 – 2000 **CNAA Grant for visiting foreign Institutes (2)**, spent at the Max-Planck-Institute for Astrophysics, Garching, Germany

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

To date I have supervised 3 PhDs (2 completed and 1 current) and 5 Postdocs (4 past and 1 current).

2013 – **Michele Boldrin**, PhD student: “Arc statistics in future surveys from space”, University of Padova, Italy;
2009 – 2012 **Fabio Bellagamba**, PhD student: “Testing future weak lensing surveys through simulations of observations”, University of Bologna, Italy
2008 – 2011 **Annamaria Donnarumma**, PhD student: “X-ray and lensing mass estimates in galaxy clusters”, University of Bologna, Italy
2013 – **Ilaria Formicola**, Postdoc at INAF-Astronomical Observatory of Bologna
2012 – 2013 **Fabio Bellagamba**, Postdoc at INAF-Astronomical Observatory of

- Bologna, now Postdoc at DIFA, University of Bologna, Italy, with Dr. R. B. Metcalf
- 2011 – 2012 **Annamaria Donnarumma**, Postdoc at INAF-Astronomical Observatory of Bologna, now Postdoc at IAP, Paris, France, with Dr. R. Gavazzi
- 2011 – 2012 **Carlo Giocoli**, Postdoc at INAF-Astronomical Observatory of Bologna, now Postdoc at LAM, Marseille, France
- 2010 – 2011 **Julian Merten**, Postdoc at INAF-Astronomical Observatory of Bologna, now Postdoc at Caltech, Pasadena, US, with Dr. L. Moustakas, about to move to the University of Oxford, UK, as Marie-Curie Fellow
- 2010 – 2011 **Jean-Claude Waizmann**, Postdoc at INAF-Astronomical Observatory of Bologna, later Postdoc at the University of Heidelberg with Prof. M. Bartelmann, Germany

In addition to these PhDs and Postdocs, I have (since 2003) supervised 13 Master students. Nine of them are from the University of Bologna, the remainder are from the University of Heidelberg (2) and from the University of Padova (2). Eight of these students have continued in Astrophysics.

TEACHING ACTIVITIES & INTERNATIONAL SUMMER SCHOOLS

- 2012 **Lecturer** – Strong gravitational lensing, Euclid School for Engineers, Paris, France
- 2010 – **Professor** – Gravitational Lensing, Department of Physics and Astronomy, University of Bologna, Italy
- 2010 **Lecturer** – Cosmology with galaxy clusters, RESCEU/DENET Summer School, Kochi, Japan
- 2007 **Lecturer** – Statistical applications of strong lensing, Autumn School of Gravitational Lensing, Acireale, Italy
- 2007 **Lecturer** – Gravitational Lenses, Extragalactic Astrophysics, University of Tor Vergata, Rome, Italy
- 2006 **Lecturer** – Basics of gravitational lensing, Graduate School of Physics, University of Heidelberg, Germany
- 2006 **Lecturer** – Gravitational lensing, Faculty of Physics and Astronomy, University of Heidelberg, Germany

ORGANIZATION OF SCIENTIFIC MEETINGS

- 2013 **SOC member** and **LOC member**, International Conference on “The mass profile of galaxy clusters”, ~100 participants, Madonna di Campiglio, Italy

INSTITUTIONAL RESPONSIBILITIES

- 2010 – 2012 **Seminar Organizer**, INAF, Astronomical Observatory of Bologna, Italy
- 2008 – **Graduate Student Advisor**, University of Bologna and Padova, Italy

COMMISSIONS OF TRUST

- 1999 – **Reviewer**, for the major astrophysical journals (ApJ, A&A, MNRAS,...)
- 2010 **PhD Committee member**, IAP, Paris, France
- 2009 – 2015 **Member of 7 Committees for the selection of 7 Postdocs**; INAF, Astronomical Observatory of Bologna, Italy
- 2014 **Review panel member**, NASA, Astrophysics Data Analysis Program, US
- 2014 **Expert evaluator**, University of Liege, FP7-people-COFUND programme 2013-2018
- 2012 – 2015 **Expert evaluator**, Agence Nationale de Recherche, France

MAJOR INTERNATIONAL COLLABORATIONS

- Cluster Lensing And Supernovae survey with Hubble (CLASH)**. PI: Marc Postman, International collaboration (US, Europe, Taiwan, Chile): cosmic telescopes, cluster mass profiles combining lensing, X-ray, SZ and galaxy kinematics observations, arc statistics, SN searches. **Responsibility: coordinator of simulation WG**;
- Hubble Frontier Fields Initiative**. PIs: Matt Mountain and Jennifer Lotz, International collaboration (US, Europe, Japan): cosmic telescopes, mass modelling techniques,

high-z universe; **Responsibility: coordinator of the Frontier Fields Lens Modelling Comparison Challenge;**

Euclid mission. PI Y. Mellier, International mission (ESA, NASA), study dark-matter and dark energy combining multiple cosmological probes (gravitational lensing, BAO, galaxy clusters); **Responsibility: coordinator of the Strong Lensing Science Working Group; Member of the Euclid Tiger Team.**

MAJOR INTERNATIONAL COLLABORATORS

Prof. M. Bartelmann, University of Heidelberg, Germany, Arc statistics, cluster potential reconstruction

Prof. P. Natarajan, University of Yale, USA, substructures in galaxy clusters, uncertainties in mass modeling techniques

Dr. D. Coe, Space Telescope Science Institute, Baltimore, USA, uncertainties in mass modeling techniques, image simulations, high-z galaxies

Prof. R. Maiolino, Cambridge (UK), galaxy evolution, metallicity gradients in intermediate redshift galaxies

Dr. J. Rhodes, Jet Propulsion Laboratory, Pasadena, USA, cosmology with galaxy clusters, cosmological weak lensing, image simulations.

Prof. S. Mei, GEPI-Observatoire de Paris, Paris, France, cosmology with galaxy clusters, cosmological weak lensing, cosmological applications of strong lensing.

PUBLICATIONS

I am author of 103 publications in leading international peer-reviewed Journals. In addition, I am author of 39 non-refereed publications.

The following is a selection of ten significant publications:

1. **Meneghetti** et al., 2014, ApJ, 797, 34, “The MUSIC of CLASH: predictions on the concentration-mass relation” (34 citations)
2. Umetsu, Medezinski, Nonino, Merten, Postman, **Meneghetti** et al., 2014, ApJ, 795, 163, “CLASH: Weak-lensing Shear and Magnification Analysis of 20 Galaxy Clusters” (70 citations)
3. Giocoli, **Meneghetti**, et al. MNRAS, 440, 1899, “Mass and concentration estimates from weak and strong lensing: a systematic study” (19 citations)
4. Zitrin, **Meneghetti** et al., 2013, ApJ, 762, 30, “CLASH: The Enhanced Lensing Efficiency of the Highly Elongated Merging Cluster MACS J0416.1-2403” (58 citations)
5. Rasia, **Meneghetti** et al., 2012, NJPh, 14, 5018, “Lensing and X-ray mass estimates of clusters” (66 citations)
6. **Meneghetti** et al., 2010, A&A, 514, 93, “Weighing simulated galaxy clusters using lensing and X-ray” (135 citations)
7. **Meneghetti** et al. 2010, A&A, 519, 90, “Strong lensing in the MARENOSTRUM UNIVERSE. I. Biases in the cluster lens population” (62 citations)
8. Torri, **Meneghetti** et al., 2004, A&A, 349, 476, “The impact of cluster mergers on arc statistics” (76 citations)
9. **Meneghetti** et al., 2003, MNRAS, 340, 105, “Cluster cross-sections for strong lensing: analytic and numerical lens models” (89 citations)
10. **Meneghetti** et al., 2001, MNRAS, 325, 435, “Giant cluster arcs as a constraint on the scattering cross-section of dark matter” (71 citations)

BOOKS AND BOOK CHAPTERS

“The mass profile of Galaxy Clusters”, Eds. S. Ettori and **M. Meneghetti**, Space Science Reviews, 177, Issue 1-4, 2013. *(In addition to being a joint Editor, I am the first author of one chapter, and co-author of two other chapters)*

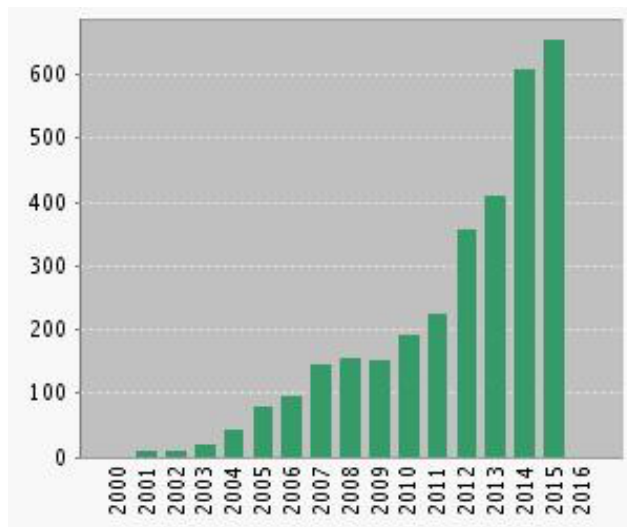
INVITED PRESENTATIONS (invited presentations in the last 3 years, total invited talk to date: 22)

1. “The Hubble Frontier-Fields”, April 2015, Dip. di Fisica, Universita’ di Roma “Tor Vergata”, **Institute Colloquium**
2. “Testing the modeling of the Frontier-Fields”, April 2015, GEPI-Observatoire de Paris-Meudon, Paris, **Institute Colloquium**
3. “The Frontier Fields Lens Modelling Comparison Project”, April 2015, Fermilab, Chicago, **Institute Colloquium**
4. Conference “Snowcluster 2015” (Snowbird, March 2015): “Modelling the mass distribution in clusters” **Invited talk.**
5. “Stress tests for the Frontier Fields”, February 2015, JPL, Pasadena, USA, **Institute Colloquium**
6. Conference “Science from the Frontier Fields” (Sesto Pusteria, February 2015): “Simulating the Frontier-Fields” **Invited talk.**
7. Conference “Galaxies and Cosmology in Light of Strong Lensing” (Tokyo, November 2014): “Lens modelling accuracy from image simulations” **Invited review.**
8. Conference “Yale Frontier Fields workshop” (New Haven, November 2014): “The Frontier Field Lens Modelling Comparison Project” **Invited talk.**
9. Conference “Cosmology with Galaxy Clusters in the XXI century” (Madrid, November 2014): “The MUSIC of CLASH” **Invited talk.**
10. Conference “Tracing Cosmic Evolution with Clusters of Galaxies” (Sesto P., July 2013): “The mass distribution of galaxy clusters” **Invited talk.**
11. Conference “CosmoLens” (Marseille, May 2013): “Strong lensing by galaxy clusters” **Invited review.**
12. Conference “Cluster Lensing: Peering into the past, preparing the future” (Baltimore, April 2013): “Simulations and lens modeling uncertainties” **Invited review.**
13. Conference “Snowcluster 2013” (Snowbird, March 2013) “Simulated observations of lensing clusters” **Invited talk.**
14. Conference “The mass profile of galaxy clusters from the core to the outskirts: the need for a multi-wavelength approach” (Madonna di Campiglio, Mar. 2013): “The mass of galaxy clusters from simulated observations” **Invited talk.**

IMPACT STATISTICS:

- Total citations: 5401 (Google Scholar); 4617 (ADS); 3181 (Web of Science)
- H-index: 44 (Google Scholar), 41 (ADS), 34 (Web of Science)
- from SAO/NASA Astrophysical Data System:
 - 6 papers topcited 100+
 - 35 papers topcited 50+
 - average citation count per first-author paper: 52

CITATIONS PER YEAR:



Source: Web of Science