

PERSONAL INFORMATION**Pasquale Mazzotta**

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Sex Male | *Nationality* Italian

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input checked="" type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
<input type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

- (2018 -) Director of the Department of Physics at the University of Roma “Tor Vergata”
- (2017 -) Full Professor at the University of Roma “Tor Vergata”
- (2013 - 2018) President of the PhD steering committee at the University of Roma “Tor Vergata”
- (2007 - 2017) Coordinator of the PhD program in Astrophysics at the University of Roma “Tor Vergata”
- (2003 - 2018) Researcher Associate position at the Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA.
- (2009 - 2012) Astrophysicist of the Harvard- Smithsonian Astrophysical Observatory, Cambridge, MA, USA.
- (2003 - 2006) Assistant Professor at the University di Roma “Tor Vergata” in connection with the MIUR program “rientro dei cervelli”
- (2001 - 2003) Was awarded with a Research Training Network fellowship tenable at the Department of Physics, university of Durham, UK
- (1999 - 2001) Was awarded with an ESA Research fellowship tenable at the Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA
- (1999) Visiting Scientist at the Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA

Research Interest

Cosmology
 Extragalactic Astrophysics
 X-ray and Microwave observations of Clusters of Galaxies
 Gravitational Lensing



EDUCATION AND TRAINING

- (1999) Ph.D. in Physics at the University of Roma "Tor Vergata"; Title of the Thesis: "Clusters of Galaxies in the X-ray and microwave bands".
- (1999) Laurea in Physics with honor at the University of Pisa (final mark of 110/110 cum laude)

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English Level C2

Job-related skills

- Coordinator of more than 20 National and international Working groups
- Author of more than 193 articles in refereed international journals; more than 32,000 citations
- H index 83 (ADS source)
- listed in the top Italian scientists of the Virtual Italian Academy (<http://www.topitalianscientists.org>)
- PI of more than 25 national and international programs funded for a total of more than 2.0 Million Dollars
- Chandra Satellite Peer Review Panel
- NASA Peer Review Panel
- Referee for the VTR program of the MIUR, since 2004 Referee for the COFIN/PRIN program of the MIUR, since 2002

ADDITIONAL INFORMATION

Honours and Awards 2016: Gruber Cosmology Prize, with the Planck Scientific Collaboration
2004: Award Rientro dei Cervelli (now renamed Programma per Giovani Ricercatori "Rita Levi Montalcini")

Publications

- 1) Planck Collaboration, Ade P. A. R., Aghanim N., Armitage-Caplan C., et al., "Planck 2013 results. XVI. Cosmological parameters", 2014, *Astronomy and Astrophysics*, 571, A16
- 2) Mazzotta P., Mazzitelli G., Colafrancesco S., Vittorio N., "Ionization balance for optically thin plasmas: Rate coefficients for all atoms and ions of the elements H to Ni", 1998, *Astronomy and Astrophysics Supplement Series*, 133, 403
- 3) Planck Collaboration, Ade P. A. R., Aghanim N., Armitage-Caplan C., et al., "Planck 2013 results. XX. Cosmology from Sunyaev-Zeldovich cluster counts", 2014, *Astronomy and Astrophysics*, 571, A20
- 4) Planck Collaboration, Ade P. A. R., Aghanim N., Arnaud M., et al., "Planck 2015 results. XXVII. The second Planck catalogue of Sunyaev-Zeldovich sources", 2016, *Astronomy and Astrophysics*, 594, A27
- 5) Mazzotta P., Rasia E., Moscardini L., Tormen G., "Comparing the temperatures of galaxy clusters from hydrodynamical N-body simulations to Chandra and XMM-Newton observations", 2004, *Monthly Notices of the Royal Astronomical Society*, 354, 10
- 6) Planck Collaboration, Ade P. A. R., Aghanim N., Arnaud M., et al., "Planck intermediate results. V. Pressure profiles of galaxy clusters from the Sunyaev-Zeldovich effect", 2013,



- Astronomy and Astrophysics, 550, A131
- 7) Rasia E., Etti S., Moscardini L., Mazzotta P., et al., "Systematics in the X-ray cluster mass estimators", 2006, Monthly Notices of the Royal Astronomical Society, 369, 2013
 - 8) Smith G. P., Kneib J.-P., Smail I., Mazzotta P., et al., "A Hubble Space Telescope lensing survey of X-ray luminous galaxy clusters - IV. Mass, structure and thermodynamics of cluster cores at $z=0.2$ ", 2005, Monthly Notices of the Royal Astronomical Society, 359, 417
 - 9) Meneghetti M., Rasia E., Merten J., Bellagamba F., et al., "Weighing simulated galaxy clusters using lensing and X-ray", 2010, Astronomy and Astrophysics, 514, A93
 - 10) Rasia E., Meneghetti M., Martino R., Borgani S., et al., "Lensing and x-ray mass estimates of clusters (simulations)", 2012, New Journal of Physics, 14, 055018
 - 11) Planck Collaboration, Ade P. A. R., Aghanim N., Armitage-Caplan C., et al., "Planck 2013 results. XXI. Power spectrum and high-order statistics of the Planck all-sky Compton parameter map", 2014, Astronomy and Astrophysics, 571, A21
 - 12) Zhang Y.-Y., Okabe N., Finoguenov A., Smith G. P., et al., "LoCuSS: A Comparison of Cluster Mass Measurements from XMM-Newton and Subaru—Testing Deviation from Hydrostatic Equilibrium and Non-thermal Pressure Support", 2010, The Astrophysical Journal, 711, 1033
 - 13) Mazzotta P., Markevitch M., Vikhlinin A., Forman W. R., et al., "Chandra Observation of RX J1720.1+2638: a Nearly Relaxed Cluster with a Fast-moving Core?", 2001, The Astrophysical Journal, 555, 205
 - 14) Planck Collaboration, Ade P. A. R., Aghanim N., Alina D., et al., "Planck intermediate results. XX. Comparison of polarized thermal emission from Galactic dust with simulations of MHD turbulence", 2015, Astronomy and Astrophysics, 576, A105
 - 15) Dalla Vecchia C., Bower R. G., Theuns T., Balogh M. L., et al., "Quenching cluster cooling flows with recurrent hot plasma bubbles", 2004, Monthly Notices of the Royal Astronomical Society, 355, 995
 - 16) Marrone D. P., Smith G. P., Okabe N., Bonamente M., et al., "LoCuSS: The Sunyaev-Zel'dovich Effect and Weak-lensing Mass Scaling Relation", 2012, The Astrophysical Journal, 754, 119
 - 17) Rasia E., Mazzotta P., Borgani S., Moscardini L., et al., "Mismatch between X-Ray and Emission-weighted Temperatures in Galaxy Clusters: Cosmological Implications", 2005, The Astrophysical Journal, 618, L1
 - 18) Rasia E., Mazzotta P., Bourdin H., Borgani S., et al., "X-MAS2: Study Systematics on the ICM Metallicity Measurements", 2008, The Astrophysical Journal, 674, 728
 - 19) Baldi A., Etti S., Mazzotta P., Tozzi P., et al., "A Chandra Archival Study of the Temperature and Metal Abundance Profiles in Hot Galaxy Clusters at $0.1 < z < 0.3$ ", 2007, The Astrophysical Journal, 666, 835
 - 20) Truong N., Rasia E., Mazzotta P., Planelles S., et al., "Cosmological hydrodynamical simulations of galaxy clusters: X-ray scaling relations and their evolution", 2018, Monthly Notices of the Royal Astronomical Society, 474, 4089
 - 21) Gardini A., Rasia E., Mazzotta P., Tormen G., et al., "Simulating Chandra observations of galaxy clusters", 2004, Monthly Notices of the Royal Astronomical Society, 351, 505
 - 22) Rasia E., Lau E. T., Borgani S., Nagai D., et al., "Temperature Structure of the Intracluster Medium from Smoothed-particle Hydrodynamics and Adaptive-mesh Refinement Simulations", 2014, The Astrophysical Journal, 791, 96
 - 23) Bartalucci I., Mazzotta P., Bourdin H., Vikhlinin A., "Chandra ACIS-I particle background: an analytical model", 2014, Astronomy and Astrophysics, 566, A25
 - 24) Rasia E., Mazzotta P., Evrard A., Markevitch M., et al., "Scaling Relation in Two Situations of Extreme Mergers", 2011, The Astrophysical Journal, 729, 45
 - 25) Melin J.-B., Aghanim N., Bartelmann M., Bartlett J. G., et al., "A comparison of algorithms for the construction of SZ cluster catalogues", 2012, Astronomy and Astrophysics, 548, A51
 - 26) Kozmany A., Bourdin H., Mazzotta P., Rasia E., et al., "Deriving the Hubble constant using Planck and XMM-Newton observations of galaxy clusters", 2019, Astronomy and Astrophysics, 621, A34
 - 27) Bourdin H., Mazzotta P., Rasia E., "Spectral Imaging of Galaxy Clusters with Planck", 2015, The Astrophysical Journal, 815, 92
 - 28) Baldi A. S., Bourdin H., Mazzotta P., Eckert D., et al., "Spectral imaging of the thermal Sunyaev-Zel'dovich effect in X-COP galaxy clusters: method and validation", 2019, Astronomy and Astrophysics, 630, A121

Signature

