

Andrea V. Macciò

Curriculum Vitae

Max Planck Institute for Astronomy
Heidelberg, Germany
☎ (0049) 6221 528416
✉ maccio@mpia.de
🌐 www.mpia.de/~maccio/GFG

Personal data

Date of birth 30 January 1975
Place of birth Roma, Italy
Status Married, three kids
Citizenship Italian

Education

1994–1999 **Masters Degree in Physics**, *The University of Milano, Italy, 110/110.*
Title *Large scale structure and gravitation lensing*
Supervisor Professor Silvio Bonometto
.
2000–2003 **PhD in Astrophysics**, *The University of Milano Bicocca, Italy, .*
Title *Non linear features in dynamical and coupled Dark Energy models*
Supervisors Professor Silvio Bonometto & Professor Anatoly Klypin

Current Employment

2010–Present **Group Leader**, MPIA, Heidelberg.
I lead an independent Max Planck Research Group (Selbstständige Forschungsgruppen, W2 Associate Professor) within the Galaxy and Cosmology department at the Max Planck Institut für Astronomie (MPIA), in Heidelberg. This group is funded by the central administration of the Max Planck Society and I have full freedom in deciding my research directions.

Previous Employment

2007–2010 **Research assistant**, MPIA, Heidelberg, Germany.
2004–2006 **Research assistant**, UNIVERSITY OF ZÜRICH, Zürich, Switzerland.
2003 **Research assistant**, UNIVERSITY OF MILANO-BICOCCA, Milano, Italy.
2001–2003 **PhD student**, UNIVERSITY OF MILANO-BICOCCA, Milano, Italy.

Research Interests

Summary.

In the last few years, a standard model of cosmology has emerged, called the Lambda Cold Dark Matter (LCDM) model. Ordinary luminous matter (baryons) makes up only a small fraction (about 4 percent) of the total mass density. The remaining part of the universe is dark and made up of two different ingredients: Dark Matter and Dark Energy. In a universe dominated by Cold Dark Matter (CDM) and a cosmological constant, galaxy formation and evolution is a complex combination of hierarchical clustering, gas dissipation, merging events and secular evolution. The aim of my research is to understand how galaxies form and evolve during cosmic times and to disentangle the different physical processes that contribute to shape galaxies. My research topics include:

- Nbody and Hydro simulations of non-standard Dark Energy Models.
- Nbody and Hydro simulations of different Dark Matter models (WDM, WCDM, etc.)
- Hydro-dynamical cosmological simulations of galaxy formation.
- Galaxy - Dark Matter connection.
- Gravitational Lensing
- Simulations of galaxy mergers and galactic dynamics.
- Numerical Modeling of feedback processes and of high energy jets.

Teaching Experiences

- Winter 2015 **Lecturer**, *Galaxy Formation and Evolution*, University of Heidelberg.
- Sept. 2014 **Lecturer**, *Dark Matter simulations*, ERC school, CEA Saclay, France.
- June 2014 **Lecturer**, *Numerical methods in Galaxy Formation*, International DAGAL PhD School Marseille Observatory.
- Winter 2014 **Lecturer**, *Galaxy Formation and Evolution*, University of Heidelberg.
- Winter 2013 **Lecturer**, *Cosmology Seminar*, University of Heidelberg.
- Winter 2012 **Lecturer**, *Experimental Physics I*, University of Heidelberg.
- Winter 2012 **Lecturer**, *Cosmology Seminar*, University of Heidelberg.
- Winter 2011 **Lecturer**, *Cosmology Seminar*, University of Heidelberg.
- June 2011 **Guest Lecturer**, *Advanced Cosmology*, Course by Prof. Luca Amendola, University of Heidelberg.
- Feb. 2011 **Lecturer**, *Structure formation in a cosmological context*, International PhD school University of Salerno Italy.
- Nov. 2010 **Lecturer**, *Numerical Cosmology*, Elite PhD course Niels Bohr Institute University of Copenhagen Denmark.
- January 2009 **Lecturer**, *Numerical Simulations*, Graduate School of Fundamental Physics Winter University Center Obergurgl Austria.
- March 2008 **Lecturer**, *Large Scale structure simulations vs. observations*, Researcher Meeting of the Transregional Research Center 33 Heidelberg Germany.
- Summer 2006 **Lecturer**, *General Relativity and Relativistic Cosmology*, ISAPP 2006 International School on Astro-Particle Physics Italy.
- Spring 2006 **Lecturer**, *Astronomy*, with Prof. P. Jetzer, University of Zürich.
- Spring 2006 **Teaching Assistant**, *Astronomy*, University of Zürich.

- Winter 2005 **Guest Lecturer**, *Astrophysics and Cosmology*, with Prof. B Moore, University of Zürich.
- Winter 2004 **Teaching Assistant**, *Numerical Methods in Astrophysics*, University of Zürich.
- Spring 2004 **Teaching Assistant**, *Statistical Mechanics II*, University of Zürich.
- Winter 2002 **Teaching Assistant**, *Mechanics & Thermodynamics*, (Physics I) Politecnico di Milano.
- Winter 2001 **Teaching Assistant**, *Mechanics & Thermodynamics*, (Physics I) Politecnico di Milano.

Awards and Funding

I have received more than 2.1 Million euro for research in the last five years, plus a grant of 625K euro to build a large supercomputer at the Max Planck Computational center. All the research funds have been directly allocated to my group, and I had personally administrated them.

Here below the details on each grant and the source of fundings.

- 2014 MILKY WAY SYSTEM II, DFG proposal, Co-PI, 340,000 euro.
- 2011 DAGAL, EU training network, Co-PI, 256,000 euro.
- 2010 MILKY WAY SYSTEM, DFG proposal, Co-PI, 162,000 euro.
- 2010 MPG-China collaboration center, PI, 120,000 euro.
- 2009 MPG independent research grant, PI, 1,200,000 euro.
- 2009 Grant for large computer, MPG, PI, 625,000 euro.

Student supervision

- 2004–2005 **Paola Solevi**, *Master thesis*, University of Milano.
- 2004–2007 **Marco Miranda**, *PhD thesis*, University of Zürich.
- 2005–2007 **Simone Weinmann**, *PhD thesis*, University of Zürich.
- 2007–2010 **Ben Moster**, *PhD student*, MPIA.
- 2008–2010 **Juan Carlos Muñoz**, *PhD thesis*, MPIA and AIP.
- 2009–2010 **Jasha Schewtschenk**, *Master thesis*, MPIA.
- 2010–2013 **Donnino Anderhalden**, *PhD thesis*, University of Zürich.
- 2011–2012 **Wouter Karman**, *Master thesis*, MPIA.
- 2011–2013 **Jiang Chang**, *PhD thesis*, MPIA.
- 2011–2014 **Rahul Kannan**, *PhD thesis*, MPIA.
- 2013–2014 **Rainer Weinberger**, *Master thesis*, MPIA.

Current research group at MPIA

- 2011–2014 **Greg Stinson**, *post-Doc*.
- 2011–2015 **Nikos Fanidakis**, *post-Doc*.
- 2011–2015 **Aaron Dutton**, *post-Doc*.
- 2011–2015 **Camilla Penzo**, *PhD student*.

- 2011–2015 **Salvatore Cielo**, *PhD student*.
2011–2014 **Athanasia Tsatsi**, *PhD student*.
2011–2014 **Jakob Herpich**, *PhD student*.
2013–2016 **Liang Wang**, *PhD student*.
2014–2016 **Thales Gutcke**, *PhD student*.
2014–2015 **Tobias Buck**, *Master student*.

Professional services

- Referee Nature, Science, Monthly Notices of the Royal Astronomical Society, Astrophysical Journal, New journal of Physics, Astronomy and Astrophysics.
Reviewer for the Time allocation committee of the Partnership for Advance Computing in Europe (PRACE).
Member of the Berlin.Minds and Zurich.Minds community (<http://zurichminds.com/>).

International collaborations

- Institute Purple Mountain Observatory (Nanjing) - Prof. Xi Kang
Galaxy formation in a Dark Universe
Partnership Group funded by the Max Planck Society
- Institute Zürich University - Prof. Ben Moore
Warm Dark Matter Models
- Institute Rutgers University - Prof. Rachel Somerville
Galaxy formation and evolution: hydro simulations and Semi-Analytical Models
- Institute Dark Cosmology Centre Copenhagen - Prof. Steen Hansen
Structure and Kinematics of Relaxed Dark Halos
- Institute Heidelberg University - Prof. L. Amendola and Prof. C. Wetterich
Large Scales Structure of the Universe and Dark Energy
- Institute Astronomy Institute in Paris (IAP) - Dr. Marta Volonteri
Relativistic Jets from Black Holes
- Institute Leiden and Amsterdam Universities - Prof. A. Boyarsky and Prof. G. Bertone
Cold+Warm mixed models and galaxy formation

Conference and International meeting organization

- Dec 2014 *The quest for Dark Energy II*, Ringberg Castle, Germany
Chair of SOC and LOC
<http://www.mpia-hd.mpg.de/~maccio/ringberg2/ringberg.html>
- May 2014 *From dark matter to galaxies*, Xi An, China
Chair of SOC
<http://gc2014.csp.escience.cn/dct/page/1/>

- May 2012 *Disc galaxy formation in a Cosmological Context*, Heidelberg, Germany
Chair of SOC and LOC
<http://www.mpia-hd.mpg.de/diskformation/home.html>
- June 2012 *The quest for Dark Energy*, Ringberg Castle, Germany
Chair of SOC and LOC
<http://www.mpia-hd.mpg.de/~maccio/ringberg/ringberg.html>

Talks at conferences and workshops (last five years)

- Sept 2014 *Dwarf galaxy formation*, Potsdam (Germany). Oral contribution.
- July 2014 *EWASS 2014 meeting*, Geneva (Switzerland). Invited reviewer.
- May 2014 *From dark matter to galaxies*, Xi An (China). Oral contribution.
- June 2013 *The Origin of the Hubble sequence*, Paris (France). Oral contribution.
- June 2013 *Galaxies and their haloes*, Munich (Germany). Oral contribution.
- Sept 2012 *Particles and the Universe*, Corfu (Greece). Invited reviewer.
- July 2012 *Dark attack*, Ascona (Switzerland). Invited reviewer.
- June 2012 *The Dark Energy quest*, Ringberg Castle (Germany). Oral contribution.
- Oct 2011 *The Dark matter universe*, Heidelberg (Germany). Invited reviewer.
- Aug 2011 *TeVpa conference*, Stockholm (Sweden). Invited reviewer.
- Dec 2010 *Dark Matter All Around*, Paris (France). Invited reviewer.
- June 2010 *Dark Matter in the Universe*, Paris (France). Invited reviewer.
- Oct 2009 *Hunting for the Dark*, Malta. Oral contribution.
- Sept 2009 *The Milky Way in the GAIA era*, Heidelberg (Germany). Oral contribution.
- July 2009 *Distribution of Mass in the Milky Way*, Leiden (Netherlands). Oral contribution.
- May 2009 *Open Problems in Galaxy Formation*, Potsdam (Germany). Oral contribution.
- April 2009 *Particle Physics and Cosmology: From the Smallest Scales to the Largest*, Copenhagen (Denmark). Invited reviewer.

Invited talks

- 2014 *Galaxy formation in a Dark Universe*, New York University, New York, USA.
- 2014 *Theoretical models for galaxy formation*, Surrey University, Gulliford, UK.
- 2013 *MaGICC galaxies and the dark sector*, Strasbourg Observatory, Strasbourg, France.
- 2013 *Some like it warm*, Institut de Physique Theorique - CEA, Saclay, France.
- 2012 *MaGICC: Making Galaxies in a Cosmological Context*, AIP, Potsdam, Germany.
- 2011 *Simulated Merger trees: a new approach to galaxy formation*, Lancashire University, Preston, UK
- 2011 *Galaxy formation in a computer*, Osservatorio di Trieste, Trieste, Italy
- 2011 *Cosmological structure formation: Models confront observations*, Max Planck for Nuclear Physics, Heidelberg, Germany.

- 2011 *Galaxy formation in a Dark Universe*, Institute for Theoretical Astrophysics, Heidelberg University, Germany
- 2011 *A new numerical approach to study galaxy formation*, Hebrew University, Jerusalem, Israel.
- 2010 *The non causal origin of Black hole - Bulge relation* , Dark Cosmology center, Copenhagen, Denmark.
- 2010 *Lightening Dark Matter and Dark Energy*, Kavli Institute for Astronomy, Cambridge, UK.
- 2010 *Dark Energy at small scales, clues from numerical simulations*, University of Stockholm, Sweden
- 2010 *Galaxy formation in a Dark Universe*, Niels Bohr Academy, Copenhagen, Denmark.
- 2009 *Milky Way satellites in the LCDM model*, Max Planck Institute for Astrophysics, Garching, Germany.
- 2009 *Dark matter at small scales: the Milky Way satellites*, Dark Cosmology center, Copenhagen, Denmark.
- 2008 *Hunting dark satellites with gravitational lensing*, EPFL, Lousanne, Switzerland.
- 2005 *New evidenced for Dark Energy*, University of Zürich, Zürich, Switzerland.
- 2005 *LCDM vs. Observations: new probes and old problems*, Geneva Observatory, Geneva, Switzerland.

Press releases

- Jan 2005 **Seattle**, *Signature of Dark Energy in the Local Group*, Macciò, Governato, Horellou, also covered by Scientific American and New Scientist.
- Jun 2006 **Zürich**, *The Universe is 13.7 Billion Years old*, Macciò, Saha, Coles, Williams.

Academic references

- PROF. CARLOS S. FRENK, Institute for Computational Cosmology, Director, Durham University, Stockton Rd, County Durham DH1 3LE, United Kingdom. Email: C.S.Frenk@durham.ac.uk
- PROF. BEN MOORE, Institute for Theoretical Physics, Director, University of Zürich, Winterthurerstr. 190, CH-8057 Zürich, Switzerland. Email: moore@physik.uzh.ch
- PROF. HANS-WALTER RIX, Max-Planck-Institut für Astronomie, Director, Königstuhl 17, 69117 Heidelberg, Germany. Email: rix@mpia.de
- PROF. RACHEL SOMERVILLE, Rutgers University, Department of Physics and Astronomy, 83 Somerset St New Brunswick, NJ 08901, United States. Email: somerville@physics.rutgers.edu

Publications

Citation analysis (September 2014)

79 refereed papers, more than 3500 citations, h-index = 30 (i.e., 30 papers with > 30 citations).

40 1st & 2nd author refereed papers, more than 1800 citations, h-index = 20.

17 1st author refereed papers, more than 1350 citations, h-index = 15.

Publication list

79, *The Distribution of Satellites around Central Galaxies in a Cosmological Hydrodynamical Simulation*, X. Dong, W. Lin, X. Kang, O. Wang, A.A. Dutton, Y. Yu, A.V. Macciò, 2014, ApJL, 791, 33.

78, *Cold dark matter haloes in the Planck era: evolution of structural parameters for Einasto and NFW profiles*, A.A. Dutton & A.V. Macciò, 2014, MNRAS, 441, 3359.

77, *A mass-dependent density profile for dark matter haloes including the influence of galaxy formation*, A. Di Cintio, C. Brook, A.A. Dutton, A.V. Macciò, G. Stinson, A. Knebe, 2014, MNRAS, 441, 2986.

76, *3D simulations of the early stages of AGN jets: geometry, thermodynamics and backflow*, S. Cielo, V. Antonuccio, A.V. Macciò, J. Silk, 2014, MNRAS, 439, 2903.

75, *Gamma-ray anisotropies from dark matter in the Milky Way: the role of the radial distribution*, F. Calore, V. De Romeri, M. Di Mauro, F. Donato, J. Herpich, A.V. Macciò, L. Maccione, 2014, MNRAS, 442, 1151.

74, *Satellite Alignment: I. Distribution of substructures and their dependence on assembly history from N-body simulations*, Y. Wang, W. Lin, X. Kang, A.A. Dutton, Y. Yu, A.V. Macciò, 2014, ApJ, 786, 8.

73, *Dark MaGICC: the effect of Dark Energy on galaxy formation. Cosmology does matter*, C. Penzo, A.V. Macciò, L. Casarini, G. Stinson, J. Wadsley, 2014, MNRAS, 442, 176.

72, *Warm dark matter does not do better than cold dark matter in solving small-scale inconsistencies*, A. Schneider, D. Anderhalden, A.V. Macciò, J. Diemand, 2014, MNRAS Letters, 441, 6.

71, *Cold stream stability during minor mergers*, L. Wang, W. Zhu, L. Feng, A.V. Macciò, J. Chang, X. Kang, 2014, MNRAS Letters, 439L, 85.

70, *The dependence of dark matter profiles on the stellar to halo mass ratio: a prediction for cusps vs coresh*, A. Di Cintio, C. Brook, A.V. Macciò, G. Stinson, A. Knebe, A. Dutton, J. Wadsley, 2014, MNRAS, 437, 415.

69, *Galaxy Formation with local photoionisation feedback I. Methods*, R. Kannan, G. Stinson, A.V. Macciò, J. Hennawi, R. Woods, J. Wadsley, S. Shen, T. Robitaille, S. Cantalupo, T. Quinn, C. Christensen, 2014, MNRAS, 437, 2882.

68, *MaGICC-WDM: the effects of warm dark matter in hydrodynamical simulations of disc galaxy formation*, J. Herpich, G. Stinson, A.V. Macciò, C. Brook, J. Wadsley, H. Couchman, T. Quinn, 2014, MNRAS, 437, 293.

- 67**, *Numerical hydrodynamic simulations based on semi-analytic galaxy merger trees: method and Milky-Way like galaxies*, B.P. Moster, A.V. Macciò, R.S. Somerville, 2014, MNRAS, 436, 1027.
- 66**, *The MaGICC volume: reproducing statistical properties of high redshift galaxies*, R. Kannan, G. Stinson, A.V. Macciò, C. Brook, J. Wadsley, H.M.P. Couchman, 2014, MNRAS, 437, 3529.
- 65**, *The MaGICC Baryon Cycle: The Enrichment History of Simulated Disc Galaxies*, C. Brook, G. Stinson, B. Gibson, S. Shen, A.V. Macciò, J. Wadsley, T. Quinn, 2014, MNRAS, 443, 3899.
- 64**, *The most luminous quasars do not live in the most massive dark matter haloes at any redshift*, N. Fanidakis, A.V. Macciò, C.M. Baugh, C.G. Lacy, C.S. Frenk, 2013, MNRAS, 436, 315.
- 63**, *Hints on the Nature of Dark Matter from the Properties of Milky Way Satellites*, D. Anderhalden, A. Schneider, A.V. Macciò, J. Diemand, G. Bertone, 2013, JCAP, 03, 014A.
- 62**, *The inner structure of haloes in cold+warm dark matter models*, A.V. Macciò, O. Ruchayskiy, A. Boyarsky, J. Munoz-Cuartas, 2013, MNRAS, 428, 882.
- 61**, *MaGICC Thick Disk I: Comparing a Simulated Disk Formed with Stellar Feedback to the Milky Way*, G.S. Stinson, J. Bovy, H.-W. Rix, C. Brook, R. Roskar, J.J. Dalcanton, A.V. Macciò, J. Wadsley, H.M.P. Couchman, T. Quinn, 2013, MNRAS, 436, 625.
- 60**, *The dependence of tidal stripping efficiency on the satellite and host galaxy morphology*, J. Chang, A.V. Macciò, X. Kang, 2013, MNRAS, 431, 3533.
- 59**, *Universal IMF vs dark halo response in early-type galaxies: breaking the degeneracy with the fundamental plane*, A.A. Dutton, A.V. Macciò, T.J. Mendel, L. Simard, 2012, MNRAS, 432, 2496.
- 58**, *The effect of Warm Dark Matter on galaxy properties: constraints from the stellar mass function and the Tully-Fisher relation*, X. Kang, A.V. Macciò, A.A. Dutton, 2013, ApJ, 767, 22.
- 57**, *Making Galaxies In a Cosmological Context: the need for early stellar feedback*, G.S. Stinson, A.V. Macciò, J. Wadsley, T. Quinn, H.M.P. Couchman, 2013, MNRAS, 428, 129.
- 56**, *A fundamental problem in our understanding of low-mass galaxy evolution*, S. Weinmann, A. Pasquali, B. Oppenheimer, K. Finlator, T.J. Mendel, R. Crain, A.V. Macciò, 2012, MNRAS, 426, 2797.
- 55**, *Thin disc, thick disc and halo in a simulated galaxy*, C.B. Brook, G.S. Stinson, B. Gibson, D. Kawata, E. House, M. Miranda, A.V. Macciò, K. Pilkington, R. Roskar, J. Wadsley, T. Quinn, 2012, MNRAS, 426, 690.
- 54**, *The galactic halo in mixed dark matter cosmologies*, D. Anderhalden, J. Diemand, G. Bertone, A.V. Macciò, A. Schneider, 2012, JCAP, 10, 47.

- 53**, *MAGICC haloes: confronting simulations with observations of the circumgalactic medium at $z=0$* , G.S. Stinson, C. Brook, J. Prochaska, J. Hennawi, S. Shen, J. Wadsley, A. Pontzen, H.M.P. Couchman, T. Quinn, A.V. Macciò, B. Gibson, 2012, MNRAS, 425, 1078.
- 52**, *The distribution of metals in cosmological hydrodynamical simulations of dwarf disc galaxies*, K. Pilkington, B. Gibson, C. Brook, F. Calura, G. Stinson, R. Thacker, L. Michel-Dansac, J. Bailin, H. Couchman, J. Wadsley, T. Quinn, A.V. Macciò, 2012, MNRAS, 425, 969.
- 51**, *Cores in warm dark matter haloes: a Catch 22 problem*, A.V. Macciò, S. Paduroiu, D. Anderhalden, Donnino; Schneider, Aurel; Moore, Ben, 2012, 424, 1105.
- 50**, *Non-linear evolution of cosmological structures in warm dark matter models*, A. Schneider, R.E. Smith, A.V. Macciò, B. Moore, 2012, MNRAS, 424, 684.
- 49**, *Dwarfs Gobbling Dwarfs: A Stellar Tidal Stream around NGC 4449 and Hierarchical Galaxy Formation on Small Scales*, D. Martinez-Delgado et al., 2012, ApJL, 748L, 24.
- 48**, *An Attractor for the Dynamical State of the Intracluster Medium*, D. Juncher, S.H. Hansen & A.V. Macciò, 2012, ApJL, 746, 28.
- 47**, *Halo expansion in cosmological hydro simulations: towards a baryonic solution of the cusp/core problem in massive spirals*, A.V. Macciò, G. Stinson, C. Brook, J. Wadsley, H.M.P. Couchman, S. Shen, B.K. Gibson, T. Quinn, 2011, ApJL, 744, 9.
- 46**, *The effects of a hot gaseous halo on disc thickening in galaxy minor mergers*, B. Moster, A.V. Macciò, R. Somerville, T. Naab, T. Cox, 2012, MNRAS, 423, 2045.
- 45**, *Interaction between dark matter sub-halos and a galactic gaseous disk*, R. Kannan, A.V. Macciò, A. Pasquali, B. Moster, F. Walter, 2012, ApJ, 746, 28.
- 44**, *What Sets the Sizes of the Faintest Galaxies?*, C. Brasseur, N. Martin, A.V. Macciò, H-W. Rix, X. Kang, 2011, ApJ, 743, 179.
- 43**, *The effects of a hot gaseous halo in galaxy major mergers*, B. Moster, A.V. Macciò, R. Somerville, T. Naab, T. Cox, 2011, MNRAS, 415, 3750.
- 42**, *The redshift evolution of Λ cold dark matter halo parameters: concentration, spin and shape*, J. Munoz-Cuartas, A.V. Macciò, S. Gottlöber, A. Dutton, 2011, MNRAS, 411, 584.
- 41**, *Properties of Dark Matter Haloes and their Correlations: the Lesson from Principal Component Analysis*, R. Skibba & A.V. Macciò, 2011, MNRAS, 416, 2388.
- 40**, *Non-linear weak lensing forecasts*, L. Casarini, G. La Vacca, L. Amendola, S. Bonometto, A.V. Macciò, 2011, JCAP, 03, 026.
- 39**, *Comparing galactic satellite properties in hydrodynamical and N-body simulations*, J. Schewtschenko & A.V. Macciò, 2011, MNRAS, 413, 878.
- 38**, *The Effect of Coupled Dark Energy on the Alignment Between Dark Matter and Galaxy Distributions in Clusters*, M. Baldi, J. Lee, A.V. Macciò, 2011, ApJ, 732, 112.

- 37**, *The Temperature of Hot Gas in Galaxies and Clusters: Baryons Dancing to the Tune of Dark Matter*, S.H. Hansen, A.V. Macciò, R. Diaz, Y. Hoffman, M. Brüggen, E. Scannapieco, G. Stinson., 2011, ApJ, 734, 62.
- 36**, *The non-causal origin of the black hole-galaxy scaling relations*, K. Jahnke & A.V. Macciò, 2011, ApJ, 734, 62.
- 35**, *High accuracy power spectra including baryonic physics in dynamical Dark Energy models*, L. Casarini, A.V. Macciò, S. Bonometto, G. Stinson, 2011, MNRAS, 412,911.
- 34**, *Dissecting the spin distribution of Dark Matter halos*, V. Antonuccio-Delogu, A. Dobrotka, U. Becciani, S. Cielo, C. Giocoli, A.V. Macciò, A. Romeo, 2010, MNRAS, 407, 1338.
- 33**, *Structure formation by fifth force: Power Spectrum from Nbody Simulations*, H.S. Zhao, A.V. Macciò, B. Li, H. Hoekstra, M. Feix, 2010, ApJL, 712, 179.
- 32**, *The enigmatic pair of dwarf galaxies Leo IV and Leo V: coincidence or common origin?*, J. de Jong, N. Martin, H-W. Rix, K. Smith, A.V. Macciò, 2010, ApJ, 710, 1664.
- 31**, *How cold is Dark Matter? Constraints from Milky Way Satellites*, A.V. Macciò & F. Fontanot, 2010, MNRAS Letters, 28M.
- 30**, *Can Gas prevent the Destruction of Thin Stellar Discs by Minor Mergers?* , B. Moster, A.V. Macciò, R.S. Somerville, P.H. Johansson, T. Naab, 2010, MNRAS, 403, 1009.
- 29**, *Luminosity function and radial distribution of Milky Way satellites in a LCDM Universe* , A.V. Macciò, X. Kang, F. Fontanot, R.S. Somerville, S. Koposov, P. Monaco, 2010, MNRAS, 402, 1995.
- 28**, *Universal Merging Histories of Dark-Matter Haloes*, E. Neistein, A.V. Macciò, A. Dekel, 2010, MNRAS, 403, 984.
- 27**, *Constraints on the relationship between stellar mass and halo mass at low and high redshift* , B.P. Moster, R.S. Somerville, C. Maulbetsch, F.C. van den Bosch, A.V. Macciò, T. Naab, L. Oser, 2010, ApJ, 710, 1664.
- 26**, *A quantitative explanation of the observed population of Milky Way satellite galaxies* , S. Koposov, J. Yoo, H.W. Rix, D. Weinberg, A.V. Macciò, J. Miralda-Escudé, 2009, ApJ, 696, 2179.
- 25**, *Central Mass of Milky Way satellites in the LCDM model* , A.V. Macciò, X. Kang & B. Moore, 2009, ApJL, 692, 109L.
- 24**, *Dynamical Dark Energy: high accuracy power spectra at high redshift*, L. Casarini, A.V. Macciò & S.A. Bonometto, 2009, JCAP, 03, 014.
- 23**, *Dark matter angular momentum profile from the Jeans equation*, K. Schmidt, S. Hansen, J. An, L. Williams, A.V. Macciò, 2009, ApJ, 694, 893.
- 22**, *Alas: Dark matter structures were not that trivial*, K. Schmidt, S. Hansen, A.V. Macciò, 2008, ApJL, 689, 33.

- 21**, *Concentration, Spin and Shape of Dark Matter Haloes as a function of the Cosmological Model: WMAP1, WMAP3 and WMAP5 results*, A. V. Macciò, A. A. Dutton, F. C. van den Bosch, 2008, MNRAS, 391, 1940.
- 20**, *The formation of ultra-compact dwarf galaxies and nucleated dwarf galaxies*, T. Goerdt, B. Moore, S. Kazantzidis, T. Kaufmann, A.V. Macciò, J. Stadel, 2007, MNRAS, 385, 2136.
- 19**, *Constraining Warm Dark Matter using QSO gravitational lensing*, M. Miranda & A. V. Macciò, 2007, MNRAS, 382, 1225.
- 18**, *Dependence of local reionization history from mass and environment*, S. Weinmann, A.V. Macciò, I. Iliev, G. Mallema & B. Moore, 2007, MNRAS, 381, 367.
- 17**, *Concentration, Spin and Shape of Dark Matter Haloes: Scatter and the Dependence on Mass and Environment*, A. V. Macciò, A. A. Dutton, F. C. van den Bosch, B. Moore, D. Potter & J. Stadel, 2007, MNRAS, 378, 55.
- 16**, *Radial density profiles of time-delay lensing galaxies*, J. I. Read, P. Saha & A.V. Macciò, 2007, ApJ, 667, 645.
- 15**, *Towards a Concordant Model of Halo Occupation Statistics*, F. C. van den Bosch, X. Yang, H.J. Mo, S. M. Weinmann, A. V. Macciò, S. More, M. Cacciato, R. Skibba, K. Xi, 2007, MNRAS, 376, 841.
- 14**, *The Hubble Time Inferred from 10 Time Delay Lenses*, P. Saha, J. Coles, A.V. Macciò & L. Williams, 2006, ApJL, 650, 17L.
- 13**, *The origin of polar ring galaxies: evidence for galaxy formation by cold accretion*, A.V. Macciò, B. Moore & J. Stadel, 2006, ApJL, 636 25L.
- 12**, *Radial distribution and strong lensing statistics of satellite galaxies and substructure using high resolution LCDM hydrodynamical simulations*, A.V. Macciò, B. Moore, J. Stadel & J. Diemand, 2006, MNRAS, 366, 1529.
- 11**, *Tracing the Nature of Dark Energy with Galaxy Distribution*, P. Solevi, R Mainini, S.A. Bonometto, A.V. Macciò, A. Klypin & S. Gottloeber, 2006, MNRAS, 366, 1346.
- 10**, *The effect of low mass substructures on the Cusp lensing relation*, A.V. Macciò & M. Miranda, 2006, MNRAS, 368, 599.
- 9**, *Strong gravitational lensing and dynamical dark energy*, A.V. Macciò, 2005, MNRAS, 361, 1250.
- 8**, *The signature of Dark Energy on the local Hubble flow*, A.V. Macciò, F. Governato & C. Horellou, 2005, MNRAS, 359, 941.
- 7**, *Coupled dark energy: Parameter constraints from N-body simulations*, A.V. Macciò, C. Quercellini, R Mainini, L. Amendola & S.A. Bonometto, 2004, PhRvD, 69, 13516.
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