

Luciano Casarini

CURRICULUM VITAE

UFES - Department of Physics, Av. Fernando Ferrari, 514 - Goiabeiras, Vitória - ES, 29075-910, Brazil

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Personal

Born 29/01/1978 - Bologna, Italy
Citizenship Italian
Status married

Interests

Research Dark Energy, Structure Formation, Weak Lensing, CMB, N-Body & Hydro simulations, Data Science & Machine Learning
Teaching Physics, Math, Stats, Distance Learning

Education

UNIBO (University of Bologna)

PH.D. IN PHYSICS

- thesis: *The Nature of Dark Energy, Theoretical Assumptions and Experimental Data*
- advisors: Prof. Roberto Balbinot & Prof. Silvio A. Bonometto
- revalidated in Brazil by CBPF, Rio de Janeiro, 2012

Bologna/Milan, Italy

Sep. 2004 - May 2007

UNIBO (University of Bologna)

LAUREA (B.Sc. + M.Sc.) IN PHYSICS, 110/110

- thesis: *Sulla Propagazione di Onde Lineari in Mezzi Dispersivi e Dissipativi*
- advisor: Prof. Francesco Mainardi
- revalidated in Brazil by UFRJ, Rio de Janeiro, 2013

Bologna, Italy

Sep. 1997 - Jul 2002

Skills

Programming Fortran 77/90, C, python, Unix shell, LaTeX, gnuplot, SMongo, IDL
Software PKEqual, CAMB, CLASS, CosmoMC, Grafic-2, Pkdgrav2, Gasoline, N-BodyShop, PM-ART
Languages Italian (mother tongue), English, Portugues (Celpe-Bras)

Experience

AFTER PH.D.

UiO-ITA (University of Oslo - Institute of Theoretical Astrophysics)

AFFILIATION

- research on Dark Energy, Structure Formation, CMB, Statistical Methods

Oslo, Norway

Jan. 2017 - PRESENT

UFES-DFIS (University of Espirito Santo - Department of Physics)

VISITING PROFESSOR

- supervision: Prof. Julio C. Fabris
- teaching presential undergraduated courses and distance learning.
- research on Dark Energy, Structure Formation, Weak Lensing, N-Body & Hydro simulations, CMB, Statistical Methods
- advising undergrad students & co-advising PhD students
- organization of events

Vitoria (ES), Brazil

Feb. 2014 - PRESENT

FAPES (Espirito Santo Research Foundation) - CNPq (National Council for Scientific and Technological Development)

POSTDOCTORAL RESEARCH ASSISTANT

- supervision: Prof. Julio C. Fabris
- performed at UFES
- research on Dark Energy, Structure Formation, Weak Lensing, N-Body & Hydro simulations
- teaching presential undergraduated courses
- co-advising PhD students
- organization of events

Vitoria (ES), Brazil

Nov. 2011 - Apr. 2014

UniMiB-DFO (University of Milano-Bicocca - Department of Physics G. Occhialini)

POSTDOCTORAL RESEARCH ASSISTANT

- supervision: Prof. Silvio A. Bonometto
- research on Dark Energy, Structure Formation, Weak Lensing, N-Body & Hydro simulations

Milan, Italy
Jun. 2007 - Sep. 2011

BEFORE PH.D.

UniMiB-DFO (University of Milano-Bicocca - Department of Physics G. Occhialini)

RESEARCH ASSISTANT

- supervision: Prof. Silvio A. Bonometto
- research on Dark Energy, Structure Formation, N-Body simulations

Milan, Italy
May. 2005 - Jun. 2006

CNR-BO (National Research Council - Bologna) - IASF-BO (Institute of Astrophysics and Cosmic Physics - Bologna)

RESEARCH ASSISTANT

- supervision: Dr. Stefano Cortiglioni
- performed at IASF-Bologna under the SPORt project
- research on Cosmic Microwave Background polarization

Bologna, Italy
Jun. 2003 - Feb. 2005

UniFI (University of Florence - Department of Physics and Astronomy)

RESEARCH ASSISTANT

- supervision: Prof. Roberto Fabbri
- performed at IASF-Bologna under the SPORt project
- research on Cosmic Microwave Background polarization

Bologna, Italy
Dec. 2002 - Apr. 2003

Honors & Awards

2014

DCR grant - FAPES, *Efeitos Astrofisicos de Matéria e Energia Escura* - 21,804.00 BRL

Vitoria (ES), Brazil

Services

Referee Journal of Cosmology and Astroparticle Physics, Physics of the Dark Universe

Projects

J-PAS: Javalambre Physics of the Accelerating Universe Astrophysical Survey

JPAS COLLABORATION

CEECA-OAJ

2016 - PRESENT

EDECS : Exploring Dark Energy through Cosmic Structures

PRINCIPAL INVESTIGATOR: DR. PIER-STEFANO CORASANITI (LABORATORY UNIVERSE AND THEORIES)

ERC (European Research Council)

2014 - PRESENT

Euclid

EUCLID COLLABORATION

ESA (European Space Agency)

2011 - PRESENT

Dark-MaGICC : Dark Making Galaxies in a Cosmological Context

COORDINATOR: DR. ANDREA MACCIÓ (MAX PLANCK INSTITUTE FOR ASTRONOMY)

MPA (Max Planck Society)

2012-2015

DEUS: (Dark Energy Universe Simulation)

PRINCIPAL INVESTIGATOR: DR. JEAN-MICHEL ALIMI (LABORATORY UNIVERSE AND THEORIES)

LUTH-OBSPM

2009-2011

SPORt: Sky Polarization Observatory

PRINCIPAL INVESTIGATOR: DR. STEFANO CORTIGLIONI (IASF-BOLOGNA)

ASI (Italian Space Agency)

2002-2005

BaR-SPORt: Balloon-borne Radiometers for Sky Polarisation Observations

PRINCIPAL INVESTIGATOR: DR. STEFANO CORTIGLIONI (IASF-BOLOGNA)

ASI (Italian Space Agency)

2002-2005

Teaching

PRESENTIAL COURSES

2016/2	Structure of Matter , Bachelor - 45h	UFES
2016/1	Introduction to Astrophysics , Bachelor - 60h	UFES
2015/1	Advanced Structure of Matter , Bachelor - 60h	UFES
2014/2	Cosmology , Master/PhD - 12h	UFES
2014/2	Modern Physics I , Licenciante - 90h	UFES
2014/1	Introduction to Relativity , Bachelor - 75h	UFES
2014/1	Introduction to Astronomy , Licenciante - 60h	UFES
2013/2	Introduction to Astrophysics , Bachelor - 60h	UFES
2013/1	Electrodynamics I , Licenciante - 75h	UFES
2012/2	Quantum Mechanics II , Bachelor - 75h	UFES
2012/2	Quantum Mechanics I , Bachelor - 90h	UFES

DISTANCE LEARNING

2016/2	Analitic Geometry , Licenciante - 45h	UFES
2016/2	Classical Mechanics , Licenciante - 90h	UFES
2016/1	Linear Algebra , Licenciante - 45h	UFES
2015/2	Linear Algebra , Licenciante - 60h	UFES
2015/2	Analitic Geometry , Licenciante - 45h	UFES
2015/1	Analitic Geometry , Licenciante - 60h	UFES

Advising

2016/1 - 2016/2	Luciano Fiorini , UFES - Bachelor thesis: <i>Inflação e perturbações cosmológicas</i>	Vitoria (ES), Brazil
2015/2 - 2016/1	Raquel Fazolo , UFES - Bachelor thesis: <i>Uma introdução as perturbações cosmológicas</i>	Vitoria (ES), Brazil
2015/1 - 2015/2	Rodrigo Duarte Silva , UFES - Licenciante thesis: <i>Uma introdução a historia termica do Universo</i>	Vitoria (ES), Brazil

CO-ADVISING

2016 - now	Pedro Otavio S. Baqui , UFES - PhD, advisor: Prof. Oliver Piattella thesis: <i>Simulações cosmológicas em modelos com energia escura dinâmica</i>	Vitoria (ES), Brazil
2016 - now	Rodrigo Duarte Silva , UFES - Master, advisor: Prof. Valerio Marra thesis: <i>Statistical methods for cosmology</i>	Vitoria (ES), Brazil
2016 - now	Denilson L. A. Martins , UFES - Master, advisor: Prof. Oliver Piattella thesis: <i>Modelos de matéria escura morna</i>	Vitoria (ES), Brazil
2015 - now	Rodrigo Von Marttens , UFES - PhD, advisor: Prof. Winfried Zimdhal thesis: <i>Formação de estruturas em modelos com energia escura dinâmica</i>	Vitoria (ES), Brazil
2012 - 2015	Camilla Penzo , MPIA - PhD, advisor: Dr. Andrea Macció thesis: <i>Galaxy formation in models beyond ΛCDM</i>	Heidelberg, Germany

Committee

MASTER THESIS

6 Dec 2016	Fred Jorge Carvalho Lima , UFMA, advisor: Prof. Adalto R. Gomes thesis: <i>Estudo de Colisões kink-antikink e Espalhamento por Contorno</i>	São Luis (MA), Brazil
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BACHEROL THESIS

16 Dec 2016	Luigi Carvalho Ferreira , UFES, advisor: Prof. Ulysses Camara da Silva thesis: <i>Uma revisão sobre a estrutura causal do buraco negro de Schwarzschild</i>	Vitoria (ES), Brazil
15 Dec 2016	Ébano Vitor Lopes Martins , UFES, advisor: Prof. Júlio César Fabris thesis: <i>Estudo e aplicações do teorema do virial na teoria newtoniana da gravitação e suas generalizações</i>	Vitoria (ES), Brazil

14 Dec 2016	Luciano Fiorini Filho , UFES, advisor: Prof. Luciano Casarini thesis: <i>Inflação e perturbações cosmológicas</i>	Vitoria (ES), Brazil
24 Jun 2016	Raquel Emy Fazolo , UFES, advisor: Prof. Luciano Casarini thesis: <i>Uma introdução as perturbações cosmológicas</i>	Vitoria (ES), Brazil
2015	Frederico Luiz Stray , UFES, advisor: Prof. Galen M. Sotkov thesis: <i>Termodinâmica do Espaço-Tempo de de Sitter</i>	Vitoria (ES), Brazil

LICENCIATE THESIS

11 Dec 2015	Rodrigo Duarte Silva , UFES, advisor: Prof. Luciano Casarini thesis: <i>Uma introdução a historia termica do Universo</i>	Vitoria (ES), Brazil
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Events

ORGANIZING COMMITTEE

25-30 Sep 2016	III José Plínio Baptista School of Cosmology , UFES	Pedra Azul, Brazil
13-17 Apr 2015	Black Holes and their Analogues: 100 years of General Relativity , UFES	Ubu, Brazil
9-14 Mar 2014	II School of Cosmology José Plínio Batista , UFES	Pedra Azul, Brazil
14-19 Oct 2012	Black Holes and their Analogues: 100 years of General Relativity , UFES	Ubu, Brazil

INVITED REVIEWER

23-27 Feb 2015	Quantum Summer 2015 , UFPB-UFES	João Pessoa, Brazil
14-19 Dec 2014	The quest for Dark Energy II: theory and simulations confront observations , MPIA	Ringberg Castle, Germany
21-23 Nov 2012	Workshop: Evolution, Cosmology and Gravitation , IAG	São Paulo, Brazil
24-29 Jun 2012	The quest for Dark Energy: when theory meets simulations , MPIA	Ringberg Castle, Germany

ORAL CONTRIBUTIONS

28 Nov -1 Dec 2016	XIII Workshop on New Physics in Space , IFT-UNESP	São Paulo, Brazil
11-15 Apr 2016	12th J-PAS Meeting , CBPF	Rio de Janeiro, Brazil
15 Oct 2014	J-PAS/Theory Miniworkshop , ON	Rio de Janeiro, Brazil
29 Jun -3 Jul 2009	Invisible Universe , OBSPM	Palais de UNESCO, Paris, France
21-26 Jun 2009	XXIemes Rencontres de Blois: Windows in The Universe , OBSPM	Chateau Royal de Blois, France
2-4 Mar 2009	New Horizons for Modern Cosmology, Dark Energy Conference , GGI	Firenze, Italy

POSTERS

29 Aug - 2 Sep 2016	IV Jayme Tiomno School of Cosmology , ON	Rio de Janeiro, Brazil
18-22 May 2015	I Workshop on Current Challenges in Cosmology , Univalle	Cali, Colombia
6-10 Aug 2012	II Jayme Tiomno School of Cosmology , CBPF	Rio de Janeiro, Brazil
1-5 Aug 2011	CosmoSul, Cosmologia e Gravitaçao no Cone Sul , ON	Rio de Janeiro, Brazil

ATTENDING

25 Oct 2016	III Dark Matter day in São Paulo , ICTP-SAIFR	São Paulo, Brazil
23 Nov 2015	Dark Matter day in São Paulo , ICTP-SAIFR	São Paulo, Brazil
13-15 May 2013	Euclid Consortium Meeting 2013 , Leiden Observatory	Leiden, Netherlands
17-22 Feb 2013	V Quantum Summer , UFES	Ubu, Brazil
29-30 Nov 2011	Structure of the Universe , LUTH-OBSPM	Chateau de Meudon, France
7-8 Sep 2011	Euclid Mission Meeting 2011 , CNR-BO	Bologna, Italy
24-25 Jan 2011	Euclid Science Meeting 2011 , MPE	Garching, Germany
11-25 Jul 2010	ASTROSIM Summer School 2010 , UMK	Torun, Poland
8-11 Jun 2010	Dark Matter in the Universe and Universal Properties of Galaxies: Theory and Observations , CIAS-OBSPM	Chateau de Meudon, France
21 Jun -1 Jul 2008	Dark Matter in Astrophysics and Particle Physics , UAM	Madrid, Spain
15-22 Mar 2008	43rd Rencontres de Moriond, Cosmology , CNRS - IN2P3, CEA-DAPNIA, NSF, EU	La Thuile, Val d'Aosta, Italy
12-13 Nov 2007	Introduction to C language for scientific programming , CINECA	Bologna, Italy
10-14 Sep 2007	Frontiers of Modern Cosmology , Perimeter Institute	Toronto, Canada
3-14 Jul 2006	15th Summer School of Parallel Programming, CINECA, Bologna , CINECA	Bologna, Italy
6-10 Sep 2004	Data Analysis in Cosmology, International Summer School , IFCA-UNICAN	Valencia, Spain

19-31 July 2004 *Wavelet and Multifractal Analysis 2004*, CNRS-INRIA
19-23 April 2004 *48th Italian Astronomical Society Congress*, SAIt
8-20 Sep 2003 *Frontiers in the Universe*, Nato Advanced Institute

Cargèse, Corsica, France
Milano, Palazzo Visconti, Italy
Cargèse, Corsica, France

Invited Talks

7 Dec 2016	<i>Formação de estruturas no universo e energia escura</i> , UFMA	São Luis, Brazil
14 Sep 2016	<i>Formação de estruturas no universo e energia escura</i> , UFES	Vitoria, Brazil
20 May 2016	<i>PKequal: accurate non linear matter power spectra with dark energy</i> , UFES	Vitoria, Brazil
14 Apr 2016	<i>PKequal: extending CAMB and Coyote spectra with PKequal</i> , CBPF	Rio de Janeiro, Brazil
25 Nov 2015	<i>Extending Coyote suite & nonlinear CAMB spectra</i> , ICTP-SAIFR	São Paulo, Brazil
3 Mar 2015	<i>Dynamical Dark Energy and Galaxy formation</i> , DFMA-USP	São Paulo, Brazil
23 Jul 2014	<i>Efeitos astrofísicos da matéria e energia escuras</i> , CNPq-FAPES	Vitoria, Brazil
29 Nov 2013	<i>Essential cosmological simulations for next generations</i> , ECT-UFRN	Natal, Brazil
31 Oct 2013	<i>Simulações N-corpos e Hidrodinâmicas com Energia Escura</i> , UFPA	Belém, Brazil
20 Jun 2013	<i>Lighting dark Universe with numerical simulations</i> , UFES	Vitoria, Brazil
20 Nov 2012	<i>Efeitos astrofísicos da matéria e energia escuras</i> , CNPq-FAPES	Vitoria, Brazil
10 Oct 2012	<i>Lighting the Dark Universe: exploring its structure formation</i> , UFES	Vitoria, Brazil
12 Sep 2012	<i>Lighting dark Universe with numerical simulations</i> , UFPB	João Pessoa, Brazil
8 August 2012	<i>Lightning Dark Energy with Nbody and Hydro simulations</i> , ICRA-CBPF	Rio de Janeiro, Brazil
29 March 2012	<i>On linear tomographic shear spectra from cosmological simulations</i> , ON	Rio de Janeiro, Brazil

References

Prof. Luca Amendola

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• <https://lucaamendola.wordpress.com/>

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Prof. Andrea Macció

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• <https://nyuad.nyu.edu/en/academics/faculty/andrea-valerio-maccio-.html>

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Prof. Winfried Zimdahl

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• <http://www.cosmo-ufes.org/winfried-zimdahl.html>

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Dr. Pier-Stefano Corasaniti

LUTH, OBSERVATOIRE DE PARIS-MEUDON 5, PLACE JULES JANSSEN, 92195 MEUDON CEDEX, FRANCE

• <http://luth.obspm.fr/luthier/corasaniti/>

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+33 (1) 45077169

ARTICLES IN PEER-REVIEWED JOURNAL

- 22. Does a generalized Chaplygin gas correctly describe the cosmological dark sector?** [10.1016/j.dark.2017.02.001](https://doi.org/10.1016/j.dark.2017.02.001)
R.F. VOM MARTTENS, L. CASARINI, W. ZIMDAHL, W.S. HIPÓLITO-RICALDI AND D. MOTA
Phys.Dark Univ. **15**, 114-124 (2017)
arXiv:1702.00651 [astro-ph.CO]
- 21. CMB and matter power spectra with non-linear dark-sector interactions** [10.1088/1475-7516/2017/01/050](https://doi.org/10.1088/1475-7516/2017/01/050)
R.F. VOM MARTTENS, L. CASARINI, W.S. HIPÓLITO-RICALDI, W. ZIMDAHL
JCAP **1701**, no. 01, 050 (2017)
arXiv:1610.01665 [astro-ph.CO]
- 20. Linear and non-linear perturbations in dark energy models** [10.1088/1475-7516/2016/11/010](https://doi.org/10.1088/1475-7516/2016/11/010)
C. ESCAMILLA-RIVERA, L. CASARINI, J. C. FABRIS AND J. S. ALCANIZ
JCAP **1611**, no. 11, 010 (2016)
arXiv:1605.01475 [astro-ph.CO]
- 19. Extending the Coyote emulator to dark energy models with standard $w_0 - w_a$ parametrization of the equation of state.** [10.1088/1475-7516/2016/08/008](https://doi.org/10.1088/1475-7516/2016/08/008)
L. CASARINI, S. A. BONOMETTO, E. TESSAROTTO AND P.-S. CORASANITI
JCAP **1608** no. 08, 008 (2016)
arXiv:1601.07230 [astro-ph.CO]
- 18. Effects of Coupled Dark Energy on the Milky Way and its Satellites** [10.1093/mnras/stw1502](https://doi.org/10.1093/mnras/stw1502)
C. PENZO, A. V. MACCIÒ, M. BALDI, L. CASARINI AND J. OÑORBE
Mon. Not. Roy. Astron. Soc. **461**, no. 3, 2490 (2016)
arXiv:1504.07243 [astro-ph.CO]
- 17. Dark matter velocity dispersion effects on CMB and matter power spectra** [10.1088/1475-7516/2016/02/024](https://doi.org/10.1088/1475-7516/2016/02/024)
O. F. PIATTELLA, L. CASARINI, J. C. FABRIS AND J. A. D. F. PACHECO
JCAP **1602**, no. 02, 024 (2016)
arXiv:1507.00982 [astro-ph.CO]
- 16. Sample variance in N -body simulations and impact on tomographic shear predictions** [10.1088/0004-637X/812/1/16](https://doi.org/10.1088/0004-637X/812/1/16)
L. CASARINI, O. PIATTELLA, S. BONOMETTO AND M. MEZZETTI
Astrophys. J. **812**, no. 1, 16 (2015)
arXiv:1406.5374 [astro-ph.CO]
- 15. Neutron stars in Rastall gravity** [10.1103/PhysRevD.92.044020](https://doi.org/10.1103/PhysRevD.92.044020)
A. M. OLIVEIRA, H. E. S. VELTEN, J. C. FABRIS AND L. CASARINI
Phys. Rev. D **92**, no. 4, 044020 (2015)
arXiv:1506.00567 [gr-qc]
- 14. Structure formation in a Λ viscous CDM universe** [10.1103/PhysRevD.90.123526](https://doi.org/10.1103/PhysRevD.90.123526)
H. VELTEN, T. R. P. CARAMÉS, J. C. FABRIS, L. CASARINI AND R. C. BATISTA
Phys. Rev. D **90**, no. 12, 123526 (2014)
arXiv:1410.3066 [astro-ph.CO]
- 13. Sub-horizon evolution of cold dark matter perturbations through dark matter-dark energy equivalence epoch** [10.1088/1475-7516/2014/10/031](https://doi.org/10.1088/1475-7516/2014/10/031)
O. F. PIATTELLA, D. L. A. MARTINS AND L. CASARINI
JCAP **1410**, no. 10, 031 (2014)
arXiv:1407.4773 [astro-ph.CO]
- 12. Dark MaGICC: the effect of dark energy on disc galaxy formation. Cosmology does matter** [10.1093/mnras/stu857](https://doi.org/10.1093/mnras/stu857)
C. PENZO, A. V. MACCIÒ, L. CASARINI, G. S. STINSON AND J. WADSLEY
Mon. Not. Roy. Astron. Soc. **442**, no. 1, 176 (2014)
arXiv:1401.3338 [astro-ph.CO]
- 11. Cosmology and fundamental physics with the Euclid satellite** [10.12942/lrr-2013-6](https://doi.org/10.12942/lrr-2013-6)
L. AMENDOLA *et al.* [EUCLID THEORY WORKING GROUP COLLABORATION]
Living Rev. Rel. **16**, 6 (2013)
arXiv:1206.1225 [astro-ph.CO]
- 10. Bouncing solutions in Rastall's theory with a barotropic fluid** [10.1134/S02Transcript](https://doi.org/10.1134/S02Transcript) written on
[cv.log. 02289313030109](https://doi.org/10.22893/13030109)
G. F. SILVA, O. F. PIATTELLA, J. C. FABRIS, L. CASARINI AND T. O. BARBOSA
Grav. Cosmol. **19**, 156 (2013)
arXiv:1212.6954 [gr-qc]

- 9. Direct recovery of fluctuation spectra from tomographic shear spectra** [10.1088/1475-7516/2012/06/005](https://doi.org/10.1088/1475-7516/2012/06/005)
M. MEZZETTI, S. A. BONOMETTO, L. CASARINI AND G. MURANTE
JCAP **1206**, 005 (2012)
- 8. Tomographic weak lensing shear spectra from large N-body and hydrodynamical simulations** [10.1051/0004-6361/201118617](https://doi.org/10.1051/0004-6361/201118617)
L. CASARINI, S. A. BONOMETTO, S. BORGANI, K. DOLAG, G. MURANTE, M. MEZZETTI, L. TORNATORE AND G. LA VACCA
Astron. Astrophys. **542**, A126 (2012)
arXiv:1203.5251 [astro-ph.CO]
- 7. High accuracy power spectra including baryonic physics in dynamical Dark Energy models** [10.1111/j.1365-2966.2010.17948.x](https://doi.org/10.1111/j.1365-2966.2010.17948.x)
L. CASARINI, A. V. MACCIO', S. A. BONOMETTO AND G. S. STINSON
Mon. Not. Roy. Astron. Soc. **412**, 911 (2011)
arXiv:1005.4683 [astro-ph.CO]
- 6. Non-linear weak lensing forecasts** [10.1088/1475-7516/2011/03/026](https://doi.org/10.1088/1475-7516/2011/03/026)
L. CASARINI, G. LA VACCA, L. AMENDOLA, S. A. BONOMETTO AND A. V. MACCIO
JCAP **1103**, 026 (2011)
arXiv:1102.3877 [astro-ph.CO]
- 5. Spectra of dynamical Dark Energy cosmologies from constant-w models** [10.1016/j.newast.2010.02.004](https://doi.org/10.1016/j.newast.2010.02.004)
L. CASARINI
New Astron. **15**, 575 (2010)
arXiv:0911.1315 [astro-ph.CO]
- 4. High-precision spectra for dynamical Dark Energy cosmologies from constant-w models** [10.1088/1475-7516/2010/08/005](https://doi.org/10.1088/1475-7516/2010/08/005)
L. CASARINI
JCAP **1008**, 005 (2010)
arXiv:1006.0981 [astro-ph.CO]
- 3. Dynamical Dark Energy simulations: high accuracy Power Spectra at high redshift** [10.1088/1475-7516/2009/03/014](https://doi.org/10.1088/1475-7516/2009/03/014)
L. CASARINI, A. V. MACCIO' AND S. A. BONOMETTO
JCAP **0903**, 014 (2009)
arXiv:0810.0190 [astro-ph]
- 2. Cosmic microwave background polarization and reionization: Constraining models with a double reionization** [10.1051/0004-6361:20041761](https://doi.org/10.1051/0004-6361:20041761)
L. P. L. COLOMBO, G. BERNARDI, L. CASARINI, R. MAININI, S. A. BONOMETTO, E. CARRETTI AND R. FABBRI
Astron. Astrophys. **435**, 413 (2005)
astro-ph/0408022
- 1. The Sky Polarization Observatory (SPOrt)** [10.1016/j.newast.2003.11.004](https://doi.org/10.1016/j.newast.2003.11.004)
S. CORTIGLIONI *et al.*
New Astron. **9**, 297 (2004)
astro-ph/0401193
- INTERNATIONAL PEER-REVIEWED CONFERENCES/PROCEEDINGS
- 5. Physics of the Cosmic Microwave Background Radiation** [10.1007/978-3-319-44769-8](https://doi.org/10.1007/978-3-319-44769-8)
D. WANDS, O. F. PIATTELLA AND L. CASARINI
Astrophys. Space Sci. Proc. **45**, 3 (2016)
arXiv:1504.06335 [astro-ph.CO]
- 4. High precision spectra at large redshift for dynamical DE cosmologies** [10.1088/1742-6596/259/1/012025](https://doi.org/10.1088/1742-6596/259/1/012025)
S. A. BONOMETTO, L. CASARINI, A. V. MACCIO' AND G. STINSON
J. Phys. Conf. Ser. **259**, 012025 (2010)
arXiv:1009.2964 [astro-ph.CO]
- 3. High accuracy Spectra at high z in Dynamical Dark Energy simulations** [10.1063/1.3462713](https://doi.org/10.1063/1.3462713)
L. CASARINI, A. V. MACCIO' AND S. A. BONOMETTO
AIP Conf. Proc. **1241**, 759 (2010)
- 2. High accuracy power spectra at high redshift in dynamical dark energy simulations** [10.1016/j.nuclphysbps.2009.07.018](https://doi.org/10.1016/j.nuclphysbps.2009.07.018)
L. CASARINI, A. V. MACCIO AND S. A. BONOMETTO
Nucl. Phys. Proc. Suppl. **194**, 185 (2009)

1. The BaR-SPOrt experiment: measuring the CMBP E-mode power spectrum from Dome C

10.1051/eas:2005013

E. CARRETTI *et al.*

EAS Publications Series **14**, 81 (2005)

LOCAL PEER-REVIEWED CONFERENCES/PROCEEDINGS

2. Numerical Simulations of the dark universe

ISBN: 978-85-7772-191-7

H. VELTEN AND L. CASARINI.

Structure formation in an expanding universe, 203, EDUFES (2014)

1. Cosmologies with dynamical and coupled Dark Energy vs. CMB data

ISBN-10:8130800896

ISBN-13:9788130800899

S. A. BONOMETTO, L. CASARINI, L. P. L. COLOMBO AND R. MAININI

Cosmic Polarization, 241, Research Signpost (2007)

astro-ph/0612672