

Elsa M. Teixeira | Curriculum Vitae

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PERSONAL INFORMATION

Name: Elsa Maria Campos Teixeira

Nationality: Portuguese

Date and place of birth: 14 September 1995, Lisbon, Portugal

Languages: English - Proficient (IELTS score 8.0 overall) ◦ Portuguese - Native Speaker ◦ Spanish - Conversational Fluent ◦ French - Basic (A2 CEFR level)

EDUCATION

2019 → Present	PhD Student in Mathematics , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
PhD Thesis	<i>Illuminating the Dark Sector: Searching for new interactions between dark matter and dark energy</i>
PhD Supervisor	Prof. Dr. Carsten van de Bruck
2016 - 2018	MSc Degree in Physics - Astrophysics and Cosmology (18/20) , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i>
MSc Thesis	<i>Models of Disformally Coupled Dark Energy (19/20)</i>
Supervisor	Dr. Nelson Nunes and Prof. Dr. Ana Nunes
2013 - 2016	Undergraduate Degree in Physics (18/20) , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i>
Bachelor Thesis	<i>Lotka-Volterra Models: Theory and Applications (19/20)</i>
Supervisor	Prof. Dr. Ana Nunes

PROFESSIONAL EXPERIENCE

October 2019 → Present	Graduate Teaching Assistant and PhD student , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
October 2019 → Present	Institutional Collaborator , <i>Institute of Astrophysics and Space Sciences (IA), and Faculdade de Ciências da Universidade de Lisboa (FCUL), Portugal</i>
October 2022	Research Visiting Student , <i>Università di Napoli “Federico II” & INFN Sezione di Napoli</i>
February - August 2019	Master Research Fellow , <i>Fundação para a Ciência e Tecnologia (FCT), Institute of Astrophysics and Space Sciences (IA), and Faculdade de Ciências da Universidade de Lisboa (FCUL), Portugal</i>

AWARDS AND HONOURS

29 November - 2 December 2022	Kashiwa Dark Matter Symposium 2022 , <i>Institute for Cosmic Ray Research, University of Tokyo</i>
Award	Prize for the Best Poster Presenter, sponsored by Physics, MDPI
18 - 31 October 2022	Exchange Travel Grant of the European Consortium for Astroparticle Theory (EuCAPT) , <i>Università di Napoli “Federico II” & INFN Sezione di Napoli</i>
Grant	Travel exchange award to travel to another EuCAPT institution for a scientific collaboration (13/37 successful applications)
4 - 5 April 2022	Best Student Talk Prize , <i>Britgrav Meeting 2022, Institute for Gravitational Research, University of Glasgow</i>
Award	Prize for The Best Student Talk Prize, sponsored by the IOP Publishing Group
October 2019 → Present	FCT PhD Research Scholarship: SFRH/BD/143231/2019 , <i>Fundação para a Ciência e Tecnologia (FCT), Portugal</i>
Postgraduate Student Fellowship	Successful application to the 2019 Call for PhD Scholarships by the Portuguese Ministry for Science, Technology and Higher Education. The rate of success was 41% of the total number of applicants and only 5% of the approved were to be carried at a foreign institution. Research Project: “ <i>Illuminating the dark sector: Searching for new interactions between dark matter and dark energy</i> ”. Institution: <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
February - August 2019	FCT Research Scholarship: BI-MESTRE- IF/00852/2015, <i>Fundação para a Ciência e Tecnologia (FCT), Institute of Astrophysics and Space Sciences (IA), and Faculdade de Ciências da Universidade de Lisboa (FCUL), Portugal</i>
Research Fellowship	Research Fellowship for Master degree holders in the project “IF/00852/2015”, financed by Fundação para a Ciência e a Tecnologia, I.P. FCT/MCTES, under the FCT Investigator Grant. Work Plan: Analytical and numerical research on dark energy couplings with the aim of understanding the present acceleration of the Universe.
2016/2017	Academic Merit Award , <i>Faculdade de Ciências, Universidade de Lisboa</i>
Award	Top class student of the Master degree in Physics
2015/2016	Academic Merit Award , <i>Faculdade de Ciências, Universidade de Lisboa</i>
Award	Top graduating student in Physics of the class 2013-2016
2014/2015	Academic Merit Award , <i>Faculdade de Ciências, Universidade de Lisboa</i>
Award	Top class student of the 2 year of the Physics undergraduate
2013/2014	Academic Merit Award , <i>Faculdade de Ciências, Universidade de Lisboa</i>
Award	Top class student of the 1 year of the Physics undergraduate
2013/2014	Award of the Fundação da Faculdade de Ciências, Universidade de Lisboa
Award	Distinction awarded to the top 1 year students of an undergraduate degree
13 April 2012	First National Philosophy Olympiads , <i>Lisbon, Portugal</i>
Award	Bronze medal (3 place)

SCIENTIFIC MEMBERSHIPS

2022 → Present	Member of the Euclid Collaboration (waiting approval)
2022 → Present	Member of COST Action CA21136, Chair: Prof Jackson Levi Said
2021 → Present	Participant of FCT project No. PTDC/FIS-AST/0054/2021, PI: Dr. Noemi Frusciante
2018 - 2019	Participant of FCT project No. COMPETE2020: POCI-01-0145-FEDER-028987, PI: Dr. Carlos Martins
2017 - 2019	Participant of FCT project No. IF/00852/2015, PI: Dr. Nelson Nunes
2016 - 2018	Participant of FCT project No. FCT: UID/FIS/04434/2013; COMPETE2020: POCI-01-0145-FEDER-007672, PI: Dr. José Afonso - Member of the Instituto de Astrofísica e Ciências do Espaço (IA)
2016 - 2020	Member of COST Action CA15117, Chair: Prof. Ruth Lazkoz

NUMERICAL SKILLS AND IT COMPETENCES

2020 → Present	MontePython Monte Carlo Markov Chain sampling package that can be interfaced with CLASS . Written in Python with a modular structure for easy modifications. I have used this tool to provide parameter constraints and cosmological tests . I have implemented likelihoods for forecasts with Einstein Telescope, LISA, KiDS and Euclid.
2019 → Present	CLASS Einstein-Boltzmann code for cosmological parameter estimation. Written in C, MPI parallel, and Python wrapper. I developed and implemented a private version suited for general interacting dark energy models . Easy input of any conformal/disformal coupling and easily-adapted to other interactions. Different versions for different kinds of scalar field (quintessence, tachyon, DBI).

Programming expertise: **Python**, **C**, **C++**, **Mathematica**, and **bash** scripting ◦ Experience with handling **large datasets** and job submission on **HPC clusters** ◦ Others: very good knowledge of \LaTeX , GIT version control, Getdist python package, MATLAB and experience with IDL, MPI parallel and Gnuplot ◦ Operating systems: Mac OS, Linux, Windows

TEACHING EXPERIENCE

2022/2023	Graduate Teaching Associate , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
Teaching and Marking	To work alongside academic staff in the delivery of teaching and student assessment in a range of learning environments. Lead demonstrator of tutorials for “AER201 MATHEMATICS FOR AEROSPACE ENGINEERS” and “MAS253 MATHEMATICS FOR ENGINEERING MODELLING” assistant demonstrator of Python computer lab classes and homework marking for “MAS212 SCIENTIFIC COMPUTING AND SIMULATION”.

2022 → Present	Volunteer Tutoring and Mentoring , <i>Associação Renovar a Mouraria - Tempo para Crescer (TPC), Lisboa, Portugal (online)</i>
Tutoring	Non-profit study support service directed to children and young people from Mouraria, with the aim of improving school results, promoting social and emotional competences, increasing motivation and digital inclusion and facilitating parents' communication with the school. Weekly online Mathematics and English tutoring.
2021/2022	Graduate Teaching Associate , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
Teaching and Marking	To work alongside academic staff in the delivery of teaching and student assessment in a range of learning environments. Lead demonstrator of tutorials and homework marking for “MAS112 VECTORS AND MECHANICS” and “MAS151 MATHEMATICS (CIVIL ENGINEERING)” (two semesters).
June - September 2021	Dissertation Support Worker , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
Writing Support	Assist MSc Dissertation supervisors for full-time students on their MScs in Statistics. Series of lectures/discussions accompanied by one-to-one Writing Support Sessions, focusing on helping master students with the structure, clarity, prose, style and grammar of what they have written.
2020/2021	Graduate Teaching Assistant , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
Teaching and Marking	Support and assist academic staff in the delivery of teaching and student assessment under direct academic supervision. Assistant demonstrator of tutorials and homework marking for “MAS112 VECTORS AND MECHANICS” (two semesters) and “MAS140 MATHEMATICS (CHEMICAL ENGINEERING)” (one semester).
2019/2020	Graduate Teaching Assistant , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
Teaching and Marking	Support and assist academic staff in the delivery of teaching and student assessment under direct academic supervision. Assistant demonstrator of tutorials and homework marking for “MAS222 DIFFERENTIAL EQUATIONS” (one semester).
2018/2019	Teaching Assistant , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i>
Teaching	Teaching of Physics laboratory classes (one semester) of the course entitled “LABORATORY” aimed at 2nd year students of the Health Sciences degree from the Physics Department of the Faculdade de Ciências da Universidade de Lisboa.
2017/2018	Teaching Assistant (Monitor in Physics) , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i>
Teaching	Teaching of theoretical/exercise classes (one semester) of the course entitled “PHYSICS FOR BIOLOGISTS” aimed at 1st year students of the Biology degree from the Physics Department of the Faculdade de Ciências da Universidade de Lisboa.
2014 - 2018	Tutoring
Tutoring	Individual tutoring of Physics, Chemistry and Mathematics to middle school and high school students.

SUPERVISION EXPERIENCE

June - July 2021	Undergraduate Research Internship Scheme Supervisor , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
BSc Student	Heather O'Donnell
Project Title	<i>Cosmology and Dynamical Systems</i>

SPEAKER IN CONFERENCES, WORKSHOPS AND SEMINARS

20 October 2022	Seminar of the Physics Department of the Università di Napoli “Federico II” & INFN Sezione di Napoli , <i>Naples, Italy</i> <u>Invited Speaker: “Constraining a Kinetically Coupled Dark Sector”</u>
7 - 12 September 2022	22 Hellenic School and Workshops on Elementary Particle Physics and Gravity - Tensions in Cosmology , <i>Corfu Summer Institute, Corfu, Greece</i> <u>Invited Speaker: “Observational Tensions in Kinetically Coupled Quintessence”</u>
27 June - 1 July 2022	A Shot in the Dark: New Challenges in Cosmology 2022 , <i>Lorentz Center, Leiden, the Netherlands</i> Conference contribution: “Power-law Kinetically Coupled Quintessence”
4 - 6 May 2022	IberiCOS 2022 - 16 Iberian Cosmology meeting* , <i>Institute of Space Sciences, Barcelona, Spain (hybrid)</i> Conference contribution: “Coupled Quintessence in a Closed Universe”
4 - 5 April 2022	BritGrav Meeting 2022* , <i>Institute for Gravitational Research, University of Glasgow, UK (virtual)</i> Conference contribution: “Coupled Quintessence in a Curved Universe” - IOP Gravitational Physics Group Oral Presentation Prize
29 March 2022	Sapienza Astrophysics Journal Club (AJC)* , <i>Sapienza University of Rome, Italy (virtual)</i> <u>Invited speaker: “Coupled Dark Sector in a Curved Universe”</u>
22 September 2021	2 year Postgraduate Research (PGR) Students Presentations* , <i>School of Mathematics and Statistics, University of Sheffield, UK (virtual)</i> Research Seminar: “Dark Energy Interactions in a Curved Universe”
5 - 10 July 2021	MG16 - Sixteen Marcel Grossmann Meeting* , <i>Virtual Meeting</i> Conference contribution: “Observational Constraints of Dark D-Brane Cosmology”
29 March - 1 April 2021	IberiCOS 2021 - 15 Iberian Cosmology meeting* , <i>Universidade de Coimbra, Portugal (virtual)</i> Conference contribution: “Cosmological Predictions of a Disformal Dark Sector”
3 March 2021	Cosmology, Relativity and Gravitation Seminar Series* , <i>School of Mathematics and Statistics, University of Sheffield, UK</i> Research Seminar: “Cosmological Predictions of a Disformal Dark Sector”
23 December 2020	Cosmonata 2020* , <i>Instituto de Astrofísica e Ciências do Espaço, Faculdade de Ciências, Universidade de Lisboa, Portugal</i> <u>Invited speaker: “Disformal D-Brane Cosmology”</u>
8 November 2019	School of Mathematics and Statistics PGR Student Seminar , <i>University of Sheffield</i> <u>Invited speaker: “Coupled Tachyonic Dark Energy”</u>

15 - 17 April 2019	IberiCOS 2019 - 14 Iberian Cosmology meeting , <i>Universidad del País Vasco, Bilbao, Spain</i> Conference contribution: “Disformally Coupled Quintessence Models”
22 October 2018	Master in Physics - Dissertation , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i> Research Seminar: “Models of Disformally Coupled Dark Energy”
10 - 11 September 2018	ENAA 2018 - XXVIII Encontro Nacional de Astronomia e Astrofísica , <i>Observatório Geofísico e Astronómico da Universidade de Coimbra, Portugal</i> Conference contribution: “Conformally Coupled Tachyonic Dark Energy”
26 - 28 March 2018	IberiCOS 2018 - 13 Iberian Cosmology meeting , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i> Conference contribution: “Conformally Coupled Tachyonic Dark Energy”
2 February 2018	Master In Physics - Internship , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i> Research Seminar: “Disformally Coupled Quintessence”
26 April 2017	Master In Physics - Seminar , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i> Research Seminar: “Metric-Affine Theories of Gravity”

* Remote talks.

POSTER PRESENTATIONS

29 November - 2 December 2022	Kashiwa Dark Matter Symposium 2022* , <i>Institute for Cosmic Ray Research, University of Tokyo</i> “Brane New World” - <u>best poster presenter prize</u>
27 - 28 July 2021	Sheffield SIAM-IMA Applied Mathematics Conference 2021* , <i>Faculty of Science, University of Sheffield, UK (online)</i> “Brane New World” - <u>prize in the PGR poster competition</u>
20 May 2021	Science Graduate School Showcase* , <i>Faculty of Science, University of Sheffield, UK (online)</i> “Brane New World”

PARTICIPATION IN CONFERENCES, WORKSHOPS AND SCHOOLS

22 - 24 November 2022	The First International Conference on Axion Physics and Experiment (Axion 2022)* , <i>Institute of Theoretical Physics, Chinese Academy of Sciences, China</i>
9 - 11 November 2022	WOW Physics! (Women Of the World in Physics!)* , <i>Goethe University Frankfurt, Germany</i>
4 - 15 July 2022	Cosmology from Home 2022* , <i>Virtual</i>
13 - 17 June 2022	Online Workshop ”Physics of the Early Universe”* , <i>Virtual</i>
23 - 25 May 2022	Second EuCAPT Annual Symposium* , <i>CERN, Geneva, Switzerland</i>
16 - 17 May 2022	UK Cosmology Meeting 2022 , <i>Newcastle University, Newcastle, UK</i>
27 - 29 April 2022	Cosmological and Astrophysical Probes of New Physics 2022* , <i>Princeton University, Princeton, USA</i>
25 March 2022	UK-QFT X* , <i>King’s College London, London, UK</i>
11 - 14 March 2022	Testing Aspects of General Relativity* , <i>Indian Institute of Technology, Gandhinagar, India (online)</i>

9 March 2022	Aspects of Emergent Gravity* , <i>Indian Institute of Technology, Gandhinagar, India</i>
14 - 18 February 2022	SIGRAV International School 2022 on Cosmology: from Theory to Observation* , <i>Vietri sul mare, Salerno, Italy</i>
14 - 18 February 2022	Yukawa International Seminar 2022 (YKIS2022) "Gravity - The Next Generation" , <i>Yukawa Institute for Theoretical Physics, Kyoto University, Japan</i>
19 November 2021	Cosmology Intertwined Mini-Workshop* , <i>Snowmass CF7. Cosmic Probes of Fundamental Physics</i>
6 - 12 September 2021	Fundamental Cosmology from the ELT and Space - 4 Azores School on Observational Cosmology , <i>Angra do Heroísmo, Açores, Portugal</i> Participation and presentation of a 14h30 hands-on project entitled "Assessing H_0 Results with respect to Systematic and Random Uncertainties" supervised by Dr. Rachael Beaton.
2 - 6 August 2021	COSMO'21 - International Conference on Particle Physics and Cosmology* , <i>University of Illinois, USA</i>
5 - 7 May 2021	First EuCAPT Annual Symposium* , <i>CERN, Geneva, Switzerland</i>
28 April 2021	"Bursting the bubble: Making your research accessible beyond academia" , <i>Research Retold & School of Mathematics and Statistics, University of Sheffield, UK</i>
21 - 28 April 2021	Current challenges in gravitational physics workshop* , <i>SISSA, Trieste, Italy</i>
12 - 16 April 2021	21 BritGrav, 2021* , <i>School of Mathematics and Statistics, University College Dublin, UK</i>
1 - 3 March 2021	A (Hubble) tension headache - Online Workshop 2021* , <i>Southampton Theory, Astrophysics and Gravity Research Centre, UK</i>
22 September 2020	Virtual UK Cosmology Meeting 2020* , <i>University of Sheffield, UK</i>
21 February – 11 June 2020	ELT 6060 – Speaking Skills for Research Purposes , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
28 January – 11 February 2020	Application Development for HPC with the C Programming Language , <i>School of Mathematics and Statistics, University of Sheffield, UK</i>
8 - 9 January 2020	UK Cosmo Meeting 2020 , <i>Lancaster University, UK</i>
15 - 19 July 2019	IA Cosmology School , <i>Faculdade de Ciências, Universidade de Lisboa & Observatório Astronómico de Lisboa, Portugal</i>
15 - 17 October 2018	IA-ON5 - Instituto de Astrofísica e Ciências do Espaço (IA), 5 internal workshop , <i>Hotel Termas da Curia, Anadia, Portugal</i>
30 - 31 October 2017	IA-ON4 - Instituto de Astrofísica e Ciências do Espaço (IA), 4 internal workshop , <i>Calouste Gulbenkian Foundation, Lisbon, Portugal</i>
14 - 15 November 2016	"1st CANTATA Cost action workshop - Cosmology and Astrophysics Network for Theoretical Advances and Training Actions" , <i>Faculdade de Ciências, Universidade de Lisboa, Portugal</i>
	Member of the local organising committee

* Remote attendance.

RESEARCH VISITS

18 - 31 October 2022	Università di Napoli “Federico II” & INFN Sezione di Napoli , <i>Exchange Travel Grant of the European Consortium for Astroparticle Theory (EuCAPT)</i> Research visit in the context of a collaboration with Dr. Noemi Frusciante and to give a seminar
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REFEREE EXPERIENCE

International Journal of Modern Physics D ◦ Springer Nature Scientific Reports

ORGANISATIONAL ROLES AND OTHER ACTIVITIES

2021/2022	PGR Student Seminar , <i>School of Mathematics and Statistics, University of Sheffield, UK</i> Organiser of monthly seminar sessions for the postgraduate students of the School of Mathematics and Statistics. Responsibilities include recruiting speakers, advertising and moderating sessions, and organising social activities.
2021/2022	The University of Sheffield Student Chapter of the Society for Industrial and Applied Mathematics (SIAM) and the Institute of Mathematics and its Applications (IMA) , <i>University of Sheffield, UK</i> Member of the organising committee - communication officer.
2021/2022	Undergraduate Research Internship (UGRI) Scheme Committee , <i>School of Mathematics and Statistics, University of Sheffield, UK</i> Member of the organising committee. Responsibilities include recruiting supervisors, advertising projects, managing student applications, moderating interviews and organising social activities.
2021/2022	Girl Move Academy Intercultural Buddy , <i>Voluntary work program between Portugal and Mozambique</i> Emotional and practical support to one participant of the Girl Move project.
2020 → Present	Hicks Green Impact (sustainability accreditation scheme), <i>University of Sheffield, UK</i> Core Member of the energy and charities groups.
2019 → Present	Reading Group of the PhD students of the Gravitation and Cosmology Research Group , <i>School of Mathematics and Statistics, University of Sheffield, UK</i> Organisation (and participation) of a reading group aiming at stimulating discussion and improving the PhD students' skills and knowledge.
2016 - 2018 Volunteer	Refood Oeiras Manager and Volunteer

PUBLICATION LIST

- 7) *arXiv*
Submitted to *JCAP* “A HYBRID MODEL FOR THE DARK SECTOR”
Carsten van de Bruck, Gaspard Poulot, and **Elsa M. Teixeira**
Awaiting referee in *JCAP*, [arXiv:2211.13653 \[hep-th\]](#)
- 6) *JCAP* “DISSECTING KINETICALLY COUPLED QUINTESSANCE: PHENOMENOLOGY AND OBSERVATIONAL TESTS”
Elsa M. Teixeira, Bruno J. Barros, Vasco M. C. Ferreira, and Noemi Frusciante
JCAP 11 (2022), 059, [arXiv:2207.13682 \[gr-qc\]](#)
- 5) *JHEAp* “COSMOLOGY INTERTWINED: A REVIEW OF THE PARTICLE PHYSICS, ASTROPHYSICS, AND COSMOLOGY ASSOCIATED WITH THE COSMOLOGICAL TENSIONS AND ANOMALIES”
E. Abdalla *et al.*
JHEAp 34 (2022), Contribution to: 2022 Snowmass Summer Study, 49-211, [arXiv:2203.06142 \[astro-ph.CO\]](#)
- 4) *Physical Review D* “DARK D-BRANE COSMOLOGY: FROM BACKGROUND EVOLUTION TO COSMOLOGICAL PERTURBATIONS”
Carsten van de Bruck, and **Elsa M. Teixeira**
Phys.Rev.D 101 (2020) 8, 083506, [arXiv:2007.15414 \[gr-qc\]](#)
- 3) *Physical Review D* “DISFORMALLY COUPLED QUINTESSANCE”
Elsa M. Teixeira, Nelson J. Nunes and Ana Nunes
Phys.Rev.D 101 (2020) 8, 083506, [arXiv:1912.13348 \[gr-qc\]](#)
- 2) *Annals of Physics* “BOUNCING COSMOLOGY IN $f(R, \mathcal{G})$ GRAVITY BY ORDER REDUCTION”
Bruno J. Barros, **Elsa M. Teixeira**, and Daniele Vernieri
Annals Phys. 419 (2020) 168231, [arXiv:1907.11732 \[gr-qc\]](#)
- 1) *Physical Review D* “CONFORMALLY COUPLED TACHYONIC DARK ENERGY”
Elsa M. Teixeira, Nelson J. Nunes and Ana Nunes
Phys.Rev.D 100 (2019) 4, [arXiv:1903.06028 \[gr-qc\]](#)

ONGOING WORK

I am also working on other projects that should be submitted for publication soon and included in my PhD thesis. I list these below:

- Expected 2022* “PROBING DARK D-BRANE COSMOLOGY”
Elsa M. Teixeira, and Carsten van de Bruck
Results derived and currently in the process of writing up. Should be submitted for publication before the end of 2022.
- Expected 2022* “A REVIEW OF COUPLED QUINTESSANCE IN A CLOSED UNIVERSE”
Elsa M. Teixeira, Cameron Thomas, and Carsten van de Bruck
Results derived and being written up. Should be submitted for publication before the end of 2022.
- Expected 2022* “A SHOT IN THE DARK WHITE PAPER”
Speakers of the workshop “A Shot in the Dark”
Proceedings of this workshop collecting the topics discussed by each speaker and report on the Round Table discussions. Agreed with the editors for submission to “Physics of The Dark Universe” before the end of 2022.

*Expected
2022*

“COSMOLOGICAL SIMULATIONS IN INTERACTING DARK ENERGY MODELS FULFILLING THE SWAMPLAND CONJECTURE”

Marco Baldi, **Elsa M. Teixeira**, and Carsten van de Bruck

Results derived and final details being written up. Should be submitted for publication before the end of 2022.

OUTREACH EXPERIENCE

22 November 2022	Birkdale School “Newton Society” STEM Club Lecture entitled “The Dark Side of the Universe” at Birkdale School, Sheffield for 6-form students
11 February 2021	Tapton School’s Science Seminar Series Lecture entitled “The Dark Side of the Universe” at Tapton School, Sheffield (virtual) aimed at Post 16 students
1 June 2019	Feira da Ciência - International Children’s Day Promotion of the Observatório do Lago Alqueva with an interactive activity for children entitled “Catching Starlight”, explaining the basic functioning of telescopes, Museum of Natural History and Science, Lisbon, Portugal
11 February 2019	IAU100 Women and Girls in Astronomy Day Lecture at Escola Secundária Braamcamp Freire, Pontinha for high school students
2019	CosmoEXPRESSO Project Scientific education for high school students of different schools. Introduction to investigation methods in science through direct contact with research and promotion of curiosity and scientific interests
22 November 2018	“Exploring the Universe” Project - “Composição e Evolução do Universo” Lecture about the composition and evolution of the Universe at Escola Básica Ferreira de Castro, Ouressa for 7 grade students
29 March 2017	Futurália Promotion of the Master Degree in Physics in the Futurália You Fair at FIL, Lisbon

ACADEMIC REFEREES

Referee 1

Name of referee: Carsten van de Bruck

Relationship to Applicant: PhD supervisor

Email address: c.vandebruck@sheffield.ac.uk

Referee’s Position: Professor

Organisation: School of Mathematics and Statistics, The University of Sheffield

Telephone: (0114) 2223790

Postal Address: G19 Hicks building, The University of Sheffield, Western Bank, Sheffield, S10 2TN, UK

Referee 2

Name of referee: Nelson Nunes

Relationship to Applicant: MSc supervisor

Email address: njnunes@fc.ul.pt

Referee's Position: Auxiliar Professor

Organisation: Institute of Astrophysics and Space Sciences & Faculty of Sciences, University of Lisbon

Telephone: +351 217500484

Postal Address: 8.1.43 Campo Grande 1749-016 Lisboa Portugal

Referee 3

Name of referee: Eleonora Di Valentino

Relationship to Applicant: Collaborator and member of same research group

Email address: e.divalentino@sheffield.ac.uk

Referee's Position: Research fellow

Organisation: School of Mathematics and Statistics, The University of Sheffield

Telephone: (0114) 2223790

Postal Address: G37 Hicks building, The University of Sheffield, Western Bank, Sheffield, S10 2TN, UK

Referee 4

Name of referee: Noemi Frusciante

Relationship to Applicant: Collaborator

Email address: noemi.frusciante@unina.it

Referee's Position: Faculty Member/Assistant Professor

Organisation: University of Naples "Federico II" / Università di Napoli Federico II, Dipartimento di Fisica "Ettore Pancini"

Telephone: +39 081 676498

Postal Address: Compl. Univ. di Monte S. Angelo, Edificio G, Via Cinthia, I-80126, Napoli, Italy

Elsa Teixeira