

Rodrigo Carvajal

ASTROPHYSICS PHD STUDENT

OAL - Edifício Leste, 2º piso. Tapada da Ajuda. 1349-018 Lisboa. Portugal

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Summary

Final-year PhD student in Physics and Astrophysics at the Instituto de Astrofísica e Ciências do Espaço (IA), in the Faculdade de Ciências of the Universidade de Lisboa (FCUL), in Lisbon, Portugal. Working on identification and characterisation of radio-detected active galactic nuclei and implementation of machine learning tools to detect and study them in large-area radio surveys.

Education

INSTRUCTION

Faculdade de Ciências, Universidade de Lisboa

PHD IN PHYSICS AND ASTROPHYSICS (THESIS SUBMITTED)

Lisbon, Portugal

Nov. 2019 - 2024

- Thesis: 'Towards better selection and characterisation criteria for high-redshift radio galaxies using machine-assisted pattern recognition' Supvs.: J. Afonso, I. Matute, H. Messias.

Pontificia Universidad Católica de Chile

MSC IN ASTROPHYSICS (MAXIMUM DISTINCTION)

Santiago, Chile

Mar. 2016 - Jan. 2019

- Thesis: Stacking UV-selected Lyman-Break Galaxies in the ALMA Frontier Fields¹. Supv.: F. E. Bauer.

Universidad de Chile

LICENCIADO EN CIENCIAS (BSC EQUIVALENT. DISTINCTION)

Santiago, Chile

Mar. 2007 - Jan. 2014

- Degree in Astronomy (no thesis required).

PRIZES AND AWARDS

- | | | |
|-------------|--|------------------|
| 2019 - 2024 | PhD::SPACE Fellowship , Instituto de Astrofísica e Ciências do Espaço | Lisbon, Portugal |
| 2024 | JAO Visitor Program , Joint ALMA Observatory | Santiago, Chile |
| 2017 | Teaching Assistant Scholarship , Pontificia Universidad Católica de Chile | Santiago, Chile |
| 2007 - 2010 | Beca Universidad de Chile , Universidad de Chile | Santiago, Chile |

Publications

Ten refereed publications. Three of them as first author with 20 citations. Seven publications as co-author, with 136 citations. Additionally, one publication in a conference proceedings book and one press release with impact on mass media. Values from NASA ADS as of October, 2024².

REFEREED ARTICLES

Identifying type II quasars at intermediate redshift with few-shot learning photometric classification

P. A. C. CUNHA, A. HUMPHREY, J. BRINCHMANN, S. G. MORAIS, **R. CARVAJAL**, J. M. GOMES, I. MATUTE, AND A. PAULINO-AFONSO
A&A 687, A269 A269. 2024. DOI: 10.1051/0004-6361/202346426

Selection of powerful radio galaxies with machine learning

R. CARVAJAL, I. MATUTE, J. AFONSO, R. P. NORRIS, K. J. LUKEN, P. SÁNCHEZ-SÁEZ, P. A. C. CUNHA, A. HUMPHREY, H. MESSIAS, S. AMARANTIDIS, D. BARBOSA, H. A. CRUZ, H. MIRANDA, A. PAULINO-AFONSO, AND C. PAPPALARDO
A&A 679, A101 A101. 2023. DOI: 10.1051/0004-6361/202245770

Improving machine learning-derived photometric redshifts and physical property estimates using unlabelled observations

A. HUMPHREY, P. A. C. CUNHA, A. PAULINO-AFONSO, S. AMARANTIDIS, **R. CARVAJAL**, J. M. GOMES, I. MATUTE, AND P. PAPADEROS
MNRAS 520.1 pp. 305–313. 2023. DOI: 10.1093/mnras/stac3596

An investigation of the star-forming main sequence considering the nebular continuum emission at low-z

H. MIRANDA, C. PAPPALARDO, P. PAPADEROS, J. AFONSO, I. MATUTE, C. LOBO, A. PAULINO-AFONSO, **R. CARVAJAL**, S. LORENZONI, AND D. SANTOS
A&A 669, A16 A16. 2023. DOI: 10.1051/0004-6361/202244390

Exploring New Redshift Indicators for Radio-Powerful AGN

R. CARVAJAL, I. MATUTE, J. AFONSO, S. AMARANTIDIS, D. BARBOSA, P. CUNHA, AND A. HUMPHREY
Galaxies 9.4 p. 86. 2021. DOI: 10.3390/galaxies9040086

Self-consistent population spectral synthesis with FADO. II. Star formation history of galaxies in spectral synthesis methods

C. PAPPALARDO, L. S. M. CARDOSO, J. M. GOMES, P. PAPADEROS, J. AFONSO, I. BREDÁ, A. HUMPHREY, T. SCOTT, S. AMARANTIDIS, I. MATUTE, **R. CARVAJAL**, S. LORENZONI, P. LAGOS, A. PAULINO-AFONSO, AND H. MIRANDA
A&A 651, A99 A99. 2021. DOI: 10.1051/0004-6361/202039792

The ALMA Frontier Fields Survey. V. ALMA Stacking of Lyman-Break Galaxies in Abell 2744, Abell 370, Abell S1063, MACSJ0416.1-2403 and MACSJ1149.5+2223

R. CARVAJAL, F. E. BAUER, R. J. BOUWENS, P. A. OESCH, J. GONZÁLEZ-LÓPEZ, T. ANGUITA, M. ARAVENA, R. DEMARCO, L. GUAITA, L. INFANTE, S. KIM, R. KNEISL, A. M. KOEKEMOER, H. MESSIAS, ET AL.
A&A 633, A160 A160. 2020. DOI: 10.1051/0004-6361/201936260

¹Thesis text available at <https://repositorio.uc.cl/handle/11534/22335>

²ADS Public Library: <https://ui.adsabs.harvard.edu/public-libraries/prom6U0VR26WDYTftnpfYw>

The ALMA Frontier Fields Survey. III. 1.1 mm emission line identifications in Abell 2744, MACSJ 0416.1-2403, MACSJ 1149.5+2223, Abell 370, and Abell S1063

J. GONZÁLEZ-LÓPEZ, F. E. BAUER, M. ARAVENA, N. LAPORTE, L. BRADLEY, M. CARRASCO, **R. CARVAJAL**, R. DEMARCO, L. INFANTE, R. KNEISSL, A. M. KOEKEMOER, A. M. MUÑOZ ARANCIBIA, P. TRONCOSO, E. VILLARD, AND A. ZITRIN
A&A 608, A138 A138. 2017. doi: 10.1051/0004-6361/201730961

The ALMA Frontier Fields Survey. II. Multiwavelength Photometric analysis of 1.1 mm continuum sources in Abell 2744, MACSJ0416.1-2403 and MACSJ1149.5+2223

N. LAPORTE, F. E. BAUER, P. TRONCOSO-IRIBARREN, X. HUANG, J. GONZÁLEZ-LÓPEZ, S. KIM, T. ANGUITA, M. ARAVENA, L. F. BARRIENTOS, R. BOUWENS, L. BRADLEY, G. BRAMMER, M. CARRASCO, **R. CARVAJAL**, ET AL.
A&A 604, A132 A132. 2017. doi: 10.1051/0004-6361/201730628

The ALMA Frontier Fields Survey. I. 1.1 mm continuum detections in Abell 2744, MACS J0416.1-2403 and MACS J1149.5+2223

J. GONZÁLEZ-LÓPEZ, F. E. BAUER, C. ROMERO-CAÑIZALES, R. KNEISSL, E. VILLARD, **R. CARVAJAL**, S. KIM, N. LAPORTE, T. ANGUITA, M. ARAVENA, R. J. BOUWENS, L. BRADLEY, M. CARRASCO, R. DEMARCO, ET AL.
A&A 597, A41 A41. 2017. doi: 10.1051/0004-6361/201628806

CONFERENCE PROCEEDINGS

Radio Galaxy Detection Prediction with Ensemble Machine Learning

R. CARVAJAL, I. MATUTE, J. AFONSO, S. AMARANTIDIS, AND D. BARBOSA
Machine Learning for Astrophysics, 2023, Cham. ISBN: 978-3-031-34167-0. doi: 10.1007/978-3-031-34167-0_6

PRESS RELEASES

Black holes are missing in the early Universe, and computers are after them

INSTITUTE OF ASTROPHYSICS AND SPACE SCIENCES · FACULTY OF SCIENCES, UNIVERSITY OF LISBON Dec. 2023

Experience

RESEARCH EXPERIENCE

Faculdade de Ciências, Universidade de Lisboa

PHD RESEARCHER Lisbon, Portugal
Nov. 2019 - Present

- Research as a PhD student. Project ‘The first Radio Galaxies in the Universe’.

Joint ALMA Observatory (JAO)

SCIENTIFIC VISITOR Santiago, Chile
May. 2024

- Research as scientific visitor for four weeks. Working with H. Messias in the project ‘Identifying giants in ELAIS-S1 with machine learning’.

Institute of Astrophysics, Pontificia Universidad Católica de Chile

RESEARCH ASSISTANT Santiago, Chile
Jan. 2019 - Oct. 2019

- Imaged and analysed ALMA data for project ‘Hunting for redshifts of faint DSFGs in A2744’.

Institute of Astrophysics, Pontificia Universidad Católica de Chile

MSc RESEARCHER Santiago, Chile
Mar. 2016 - Jan. 2019

- Research as MSc student. Project ‘Lyman-Break Galaxies in the ALMA Frontier Fields’.

Institute of Astrophysics, Pontificia Universidad Católica de Chile

RESEARCH ASSISTANT (SUPVS. PROF. FRANZ BAUER, DR JORGE GONZÁLEZ) Santiago, Chile
Aug. 2015 - Mar. 2016

- Used image enhancement techniques to improve quality of ALMA observations and study objects with low signal-to-noise ratio.

Joint ALMA Observatory (JAO)

RESEARCH ASSISTANT (SUPVS. DR RÜDIGER KNEISSL, DR DAVID RABANUS) Santiago, Chile
Jan. 2014 - Mar. 2015

- Studied Mars’ atmosphere and produce profiles for temperature, and wind speed using ALMA observations.

Departament of Astronomy, Universidad de Chile

RESEARCH ASSISTANT (SUPV. PROF. SEBASTIÁN LÓPEZ) Santiago, Chile
Aug. 2013 - Oct. 2013

- Studied differences from outer structures of lensing galaxies through absorbed light of far quasars.

Departament of Astronomy, Universidad de Chile

RESEARCH ASSISTANT (SUPV. DR ISABELLE PÂRIS) Santiago, Chile
Mar. 2013 - May. 2013

- Searched quasars pairs at small distances over catalogue of more than 100000 objects (SDSS-DR9 Quasar Catalog. Pâris et al. 2012).

Departament of Astronomy, Universidad de Chile

RESEARCH ASSISTANT (SUPV. PROF. SEBASTIÁN LÓPEZ) Santiago, Chile
Mar. 2012 - Jul. 2012

- Confirmed influence of thermal-broadening Doppler parameter in turbulent broadening in Intergalactic Medium.
- Measured correlation for results of Voigt curve-fitting procedures in metallic species absorption lines from far quasar emission.

Departament of Astronomy, Universidad de Chile

RESEARCH ASSISTANT (SUPV. PROF. SEBASTIÁN LÓPEZ) Santiago, Chile
Aug. 2011 - Dec. 2011

- Determined influence of thermal-broadening Doppler parameter in turbulent broadening in Intergalactic Medium.

Departament of Astronomy, Universidad de Chile

RESEARCH ASSISTANT (SUPV. DR NADIA LO) Santiago, Chile
Jan. 2011

- Worked in project “A study of the Molecular Properties of the Vela Molecular Ridge (Coud C)” searching possible clumps using data from Mopra Radio Telescope.

STUDENT SUPERVISION EXPERIENCE

Instituto de Astrofísica e Ciências do Espaço

CO-SUPERVISOR SUMMER INTERNSHIP (SUPV. DR I. MATUTE)

- Guided J. Castelo and F. Rosado. Project: 'Supermassive Black Hole growth on galaxies: Linking AGN phases through Cosmic Time'.

Lisbon, Portugal

Jul. 2024

Instituto de Astrofísica e Ciências do Espaço

CO-SUPERVISOR SUMMER INTERNSHIP (SUPVS. DRS. B. ARSIOLI, I. MATUTE)

- Guided L. Rodrigues, G. Monteiro, A. Correia, D. Barreta, and T. Melo. Project: 'Multifrequency Analysis and Machine Learning for the most powerful quasars in the Universe'.

Lisbon, Portugal

Jul. 2023

Faculdade de Ciências, Universidade de Lisboa

CO-SUPERVISOR BSc STUDENT (SUPV. DR I. MATUTE)

- Guided J. Bagagem. Project: 'Connecting galaxies photometry with Super-Massive Black Hole (SMBH) properties: A machine learning approach'.

Lisbon, Portugal

Sep. 2022 - Feb. 2023

Faculdade de Ciências, Universidade de Lisboa

CO-SUPERVISOR BSc STUDENT (SUPV. DR I. MATUTE)

- Guided J. Lopes. Project: 'Modelling Active Galactic Nuclei with Machine Learning'.

Lisbon, Portugal

Sep. 2021 - Feb. 2022

Faculdade de Ciências, Universidade de Lisboa

CO-SUPERVISOR BSc STUDENT (SUPV. DR I. MATUTE)

- Guided B. Resendes. Project: 'Identifying and characterising AGN in next-generation radio surveys with machine learning'.

Lisbon, Portugal

Sep. 2021 - Feb. 2022

Instituto de Astrofísica e Ciências do Espaço

CO-SUPERVISOR SUMMER INTERNSHIPS' STUDENTS (SUPV. DR I. MATUTE)

- Guided J. Sandrin, P. Ferreira, P. Rodrigues, and A. Monteiro. Project: 'Identifying and characterising AGN in next-generation radio surveys using machine and deep learning'.

Lisbon, Portugal

Jul. 2021

Instituto de Astrofísica e Ciências do Espaço

CO-SUPERVISOR SUMMER INTERNSHIPS' STUDENTS (SUPV. DR J. AFONSO)

- Guided A. Labib, M. E. Pimentel, L. Barroso, and J. Rato. Project: 'The 200: exploring the most active supermassive black holes in the first Gyr of the Universe'.

Lisbon, Portugal

Jul. 2021

Faculdade de Ciências, Universidade de Lisboa

CO-SUPERVISOR BSc STUDENT (SUPV. DR I. MATUTE)

- Guided I. Tiago. Project: 'Understanding triggering Radio emission from AGNs'.

Lisbon, Portugal

Sep. 2020 - Feb. 2021

Faculdade de Ciências, Universidade de Lisboa

CO-SUPERVISOR BSc STUDENT (SUPV. DR J. AFONSO)

- Guided L. Piscarreta on studying radio and X-ray emission of high-z AGN.

Lisbon, Portugal

Jul. 2020

TEACHING EXPERIENCE

Department of Physics, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile

TEACHING ASSISTANT (LECTURER: PROF. SEBASTIÁN LÓPEZ)

- Teaching Assistant of course FI1001: Introduction to Newtonian Physics.

Santiago, Chile

Mar. 2013 - Jul. 2013

School of Engineering, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile

TEACHING ASSISTANT (LECTURER: PROF. SEBASTIÁN LÓPEZ)

- Teaching Assistant of course EI2001: Project Workshop.
- Taught students how to characterise a CCD at the University Observatory.

Santiago, Chile

Mar. 2013 - Jul. 2013

Department of Astronomy, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile

TEACHING ASSISTANT (LECTURER: PROF. SEBASTIÁN LÓPEZ)

- Teaching Assistant of course AS3004-AS758.

Santiago, Chile

Mar. 2012 - Jul. 2012

OBSERVATION EXPERIENCE

30m Pico Veleta Radio Telescope

NIKA2 AND EMIR INSTRUMENTS - ONE-WEEK OBSERVATION RUN UNDER POOLED OBSERVATIONS SCHEME

IRAM, Spain

Nov. 2022

6.5m Magellan-Clay Telescope

MAGE INSTRUMENT - ONE-NIGHT OBSERVATION RUN UNDER THE SUPERVISION OF DR. ISABELLE PÂRIS

LCO, Chile

Feb. 2013

WORKING EXPERIENCE

Observatorio Astronómico Andino (OAA)

TOURIST GUIDE

- Showed tourists main features of night sky and answering questions on Astronomy and Astrophysics in both Spanish and English.

Santiago, Chile

2013 - 2019

Participation in Conferences and Seminars

CONTRIBUTED TALKS

International EMU Collaboration Meeting 2024

'ENHANCING RADIO LUMINOSITY FUNCTIONS WITH MACHINE LEARNING'

Perth. Western Australia

Sep. 2024

XXXIV Encontro Nacional de Astronomia e Astrofísica (ENAA)

'FEEDING RADIO LUMINOSITY FUNCTIONS WITH MACHINE LEARNING PREDICTIONS'

Guimarães. Portugal

Sep. 2024

Internal Workshop of the Instituto de Astrofísica e Ciências do Espaço (IA-ON9)

'BLACK HOLES FROM BLACK BOXES'

Universidade de Lisboa. Portugal

Jan. 2024

Debating the potential of Machine Learning in astronomical surveys # 2

‘EXTRACTING PHYSICAL RULES FROM ENSEMBLE MACHINE LEARNING FOR THE SELECTION OF RADIO AGN’

XXXIII Encontro Nacional de Astronomia e Astrofísica (ENAA)

‘ENSEMBLE MACHINE LEARNING FOR THE SELECTION OF RADIO AGN IN MULTI-SURVEY DATA’

SPARCS XI. Meeting of the SKA Pathfinders Radio Continuum Surveys (SPARCS)

‘ENSEMBLE MACHINE LEARNING FOR RADIO GALAXY DETECTIONS’

XXXII Encontro Nacional de Astronomia e Astrofísica (ENAA)

‘ENSEMBLE MACHINE LEARNING FOR THE EXTRACTION OF HIGH-REDSHIFT RADIO GALAXIES’

EMU International Virtual Meeting

‘SEARCHING FOR HIGH-Z RADIO GALAXY DETECTIONS WITH ENSEMBLE MACHINE LEARNING’

Jornadas Doutorais (Doctoral Day) - Faculdade de Ciências

‘PREDICTION OF DISTANT RADIO GALAXIES CANDIDATES WITH MACHINE LEARNING’

SAZERAC SIPS: Learning the high-redshift Universe

‘HIGH-REDSHIFT RADIO GALAXIES CANDIDATES PREDICTION WITH ENSEMBLE MACHINE LEARNING’

XVII SOCHIAS Meeting. Meeting of the Chilean Society of Astronomy

‘PREDICTION OF HIGH-REDSHIFT RADIO GALAXY CANDIDATES WITH ENSEMBLE MACHINE LEARNING’

SPARCS X. Meeting of the SKA Pathfinders Radio Continuum Surveys (SPARCS)

‘USING ENSEMBLE MACHINE LEARNING TO PREDICT HIGH-REDSHIFT RADIO GALAXY DETECTIONS’

Internal Workshop of the Instituto de Astrofísica e Ciências do Espaço (IA-ON8)

‘OBTAINING HIGH-REDSHIFT RADIO GALAXY CANDIDATES WITH MACHINE LEARNING’

Debating the potential of Machine Learning in astronomical surveys

‘USING A SERIES OF MACHINE LEARNING MODELS FOR THE DETECTION OF HIGH-REDSHIFT RADIO GALAXY CANDIDATES’

50th Young European Radio Astronomers Conference

‘USING MACHINE LEARNING TO IDENTIFY HIGH-REDSHIFT RADIO GALAXY CANDIDATES’

RGCW: A new window on the radio emission from galaxies, clusters and cosmic web

‘EXPLORING NEW REDSHIFT INDICATORS FOR RADIO-POWERFUL AGNs’

Internal Workshop of the Instituto de Astrofísica e Ciências do Espaço (IA-ON7)

‘SEARCHING FOR THE EARLIEST AGN IN THE RADIO SKY’

Jornadas Doutorais (Doctoral Day) - Faculdade de Ciências

‘THE FIRST RADIO GALAXIES IN THE UNIVERSE’

Distant Galaxies from the Far South

‘STACKING IN THE ALMA FRONTIER FIELDS’

INVITED TALKS AND SEMINARS

IA/ML Forum - ESO

‘HOW CONFIDENT CAN YOU BE? CALIBRATING PROBABILITIES FOR THE SELECTION OF AGN’

Seminar - Joint ALMA Observatory (JAO)

‘IDENTIFYING GIANTS IN ELAIS-S1 WITH MACHINE LEARNING’

Python Coffee - ESO

‘SHAP ANALYSIS FOR INTERPRETABLE MACHINE LEARNING IN ASTROPHYSICS’

Machine Learning in Australian Astronomy

‘SELECTION OF RADIO-DETECTED AGN WITH ENSEMBLE MACHINE LEARNING’

Machine Learning in Astronomy Group – SPARCS

‘DEVELOPING A ML PIPELINE TO DETECT HIGH-REDSHIFT RADIO GALAXY CANDIDATES’

IA - Galaxies Machine Learning Club

‘EXPLAINING MACHINE LEARNING MODELS: SHAP’

Seminar - Instituto de Astrofísica e Ciências do Espaço

‘STACKING UV-SELECTED LYMAN-BREAK GALAXIES IN THE ALMA FRONTIER FIELDS’

Seminar - ESO

‘STACKING UV-SELECTED LYMAN-BREAK GALAXIES IN THE ALMA FRONTIER FIELDS’

CONTRIBUTED POSTERS

Encontro Ciência ’24: Encontro com a Ciência e Tecnologia em Portugal

‘PREDICTION OF RADIO AGN WITH ENSEMBLE MACHINE LEARNING IN MULTI-SURVEY DATA’

Encontro Ciência ’23: Encontro com a Ciência e Tecnologia em Portugal

‘ENSEMBLE MACHINE LEARNING FOR THE PREDICTION OF RADIO AGN IN MULTI-SURVEY DATA’

Coordinated Surveys of the Southern Sky

‘RADIO GALAXY PREDICTION WITH MULTI-SURVEY DATA AND ENSEMBLE MACHINE LEARNING’

VLA Sky Survey in the Multiwavelength Spotlight

‘SEARCHING FOR RADIO GALAXY DETECTIONS WITH ENSEMBLE MACHINE LEARNING’

International Conference on Machine Learning for Astrophysics - ML4Astro

‘RADIO GALAXY DETECTION PREDICTION WITH ENSEMBLE MACHINE LEARNING’

Encontro Ciência ’22: Encontro com a Ciência e Tecnologia em Portugal

‘FINDING HIGH-REDSHIFT RADIO GALAXIES WITH MACHINE LEARNING’

Encontro Nacional de Astronomia e Astrofísica

‘DETECTION OF HIGH-REDSHIFT RADIO GALAXIES USING MACHINE LEARNING MODELS’

IAP, Paris/Flatiron Institute, New York

Nov. 2023

Universidade de Coimbra, Portugal

Sep. 2023

IDIA, South Africa

Nov. 2022

University of Lisbon, Portugal

Sep. 2022

Online

Jul. 2022

Universidade de Lisboa, Portugal

Feb. 2022

Online

Feb. 2022

Online

Jan. 2022

IDIA, South Africa

Nov. 2021

Universidade de Coimbra, Portugal

Nov. 2021

IAP, France

Oct. 2021

IRAM

Aug. 2021

INAF, Italy

Mar. 2021

Online, Portugal

Oct. 2020

Universidade de Lisboa, Portugal

Mar. 2020

Bariloche, Argentina

Dec. 2017

Garching, Germany

Jun. 2024

Santiago, Chile

May. 2024

Santiago, Chile

May 2024

Australia

Nov. 2023

WSU, Sydney, Australia

Jun. 2021

Porto, Portugal

May. 2022

Lisbon, Portugal

Jul. 2020

Santiago, Chile

Jun. 2019

Porto, Portugal

Jul. 2024

Aveiro, Portugal

Jul. 2023

Garching, Germany

Feb 2023

NRAO, Socorro, NM, U.S.A.

Sep. 2022

Catania, Italy

May 2022

Lisbon, Portugal

May 2022

Portugal

Sep. 2021

Encontro Ciência '21: Encontro com a Ciência e Tecnologia em Portugal

'USING MACHINE LEARNING TO LOOK FOR HIGH-REDSHIFT RADIO GALAXIES'

Lisbon, Portugal

Jun. 2021

A precursor view of the SKA Sky

'EXPLORING NEW REDSHIFT INDICATORS FOR RADIO-POWERFUL AGNs'

The SKA Observatory

Mar. 2021

Encontro Ciência '20: Encontro com a Ciência e Tecnologia em Portugal

'MINING THE RADIO SKY TOWARD THE EARLIEST AGN'

Lisbon, Portugal

Nov. 2020

Encontro Nacional de Astronomia e Astrofísica

'MINING THE RADIO SKY TOWARD THE EARLIEST AGN'

Online, Portugal

Sep. 2020

Ground and space observatories: a joint venture to planetary science

'MAPPING THE WINDS ON MARS. TEST STUDY FOR PLANETARY ATMOSPHERIC MONITORING WITH ALMA'

Santiago, Chile

Mar. 2015

OTHER MEETINGS

'SPARCS XII 2024' - SKA PATHFINDERS RADIO CONTINUUM SURVEYS (SPARCS) - INAF

Bologna, Italy - May 2024

'MOONS SCIENCE CONSORTIUM MEETING 2024' - FACULDADE DE CIÊNCIAS, UNIVERSIDADE DE LISBOA

Lisbon, Portugal - Jan. 2024

'ARTIFICIAL INTELLIGENCE AND THE UNCERTAINTY CHALLENGE IN FUNDAMENTAL PHYSICS' - SCAI, PARIS AND INSTITUT PASCAL PARIS-SACLAY

Paris, France - Nov. 2023

'MACHINE LEARNING MEETS GALAXY CLASSIFICATION: ADDRESSING PARADIGMS OF GALAXY EVOLUTION AND THEIR ENVIRONMENT' - ESAC

Villafranca del Castillo, Spain - Nov. 2023

'COSMOLOGY IN THE RADIO SKY: PROSPECTS AND CHALLENGES IN THE SQUARE KILOMETRE ARRAY OBSERVATORY ERA' - INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

Portugal - Dec. 2021

'MACHINE LEARNING IN SCIENCE & ENGINEERING' - COLUMBIA UNIVERSITY - DATA SCIENCE INSTITUTE

NY U.S.A. - Dec. 2020

'SOCHIAS (CHILEAN SOCIETY OF ASTRONOMY) ANNUAL MEETING'

Pucón, Chile - Dec. 2020

'EXPLOITING ARCHIVES FOR RADIO ASTRONOMY IN THE SKA-ERA'

Lisbon, Portugal - Nov. 2020

'EUROPEAN ASTRONOMICAL SOCIETY ANNUAL MEETING'

Leiden, Netherlands - Jun. 2020

'SOCHIAS (CHILEAN SOCIETY OF ASTRONOMY) ANNUAL MEETING'

Santiago, Chile - Jan. 2011

Skills

Programming Software

Python, \LaTeX , C, Java, Bash, Mathematica, Matlab

Common Astronomy Software Application (CASA), Tool for operations on catalogues and tables (TOPCAT), The Atmospheric

Radiative Transfer Simulator (ARTS), SAOImage DS9, Gnuplot, ESO-MIDAS, EsoRex

Languages

Spanish, English, Portuguese

TRAINING

18th Synthesis Imaging Workshop

NATIONAL RADIO ASTRONOMY OBSERVATORY

Socorro, NM. USA

May. 2022

Skilled, Innovative & Entrepreneurial Scientists

INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

Coimbra, Portugal

Apr. - May 2022

SKA regional centre training event. Hands-on Containerisation

SCIENCE USER ENGAGEMENT (SUE) GROUP OF SKA REGIONAL CENTRE STEERING COMMITTEE

SKAO

Feb. 2022

ALMA Community Day (Cycle 7 Proposing Workshop)

JOINT ALMA OBSERVATORY (JAO)

Santiago, Chile

Mar. 2019

Outreach

IX Ecuadorian School of Astronomy and Astrophysics

LECTURER: 'LOOKING FOR GALAXIES IN A UNIVERSE OF DATA' (IN SPANISH)

Quito, Ecuador

Aug. 2023

Ser Cientista (Being a Scientist). Faculdade de Ciências, Universidade de Lisboa

CO-SUPERVISION OF HIGH SCHOOL STUDENTS GUIDING STUDENTS ON PROJECT 'O FADO DAS GALÁXIAS' THROUGH ONE

Lisbon, Portugal

WEEK OF WORK (SUPV. C. PAPPALARDO)

Jul. 2022

Festival Internacional de Ciência (FICA) - International Festival of Science

ANSWERED QUESTIONS ABOUT OBSERVATORIES IN THE STAND OF THE INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

Oeiras, Portugal

Oct. 2021

Service

REVIEWER IN OPEN RESEARCH EUROPE (BY EUROPEAN COMMISSION)

2024

REVIEWER IN CYCLE 11 DISTRIBUTED REVIEW PROCESS - ALMA OBSERVATORY

2024

MEMBER OF DATA VALIDATION TEAM - EVOLUTIONARY MAP OF THE UNIVERSE

2023 - Present

CHAIR OF KS8 SESSION - EMU INTERNATIONAL VIRTUAL MEETING

Jul. 2022

CO-ORGANISER GALAXIES RESEARCH GROUP JOURNAL CLUB - INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

Sep. 2022 - Jul. 2023

PACE ANALYST - PORTUGUESE ALMA CENTRE OF EXPERTISE (PACE) - INSTITUTO DE ASTROFÍSICA E CIÊNCIAS DO ESPAÇO

2019 - 2020

Projects and Collaborations Membership

PROJECTS

Finding Lyman-alpha emitters through machine learning

PTCRIS: EXPL/FIS-AST/1085/2021 - P.I. A. PAULINO-AFONSO

FCT, Portugal
Jan. 2022 - Dec. 2023

COLLABORATIONS

EVOLUTIONARY MAP OF THE UNIVERSE (EMU)	2020 - Present
SQUARE KILOMETRE ARRAY OBSERVATORY (SKAO) - EXTRAGALACTIC CONTINUUM SCIENCE WORKING GROUP	2020 - Present
SKA PATHFINDERS RADIO CONTINUUM SURVEYS WORKING GROUP (SPARCS)	2020 - Present
MULTI-OBJECT OPTICAL AND NEAR-INFRARED SPECTROGRAPH (MOONS)	2023 - Present

Certificates

RESPONSIBLE CONDUCT OF RESEARCH. STAGE 1 - BASIC COURSE - COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)	2016
HUMAN SUBJECTS RESEARCH. STAGE 1 - BASIC COURSE - COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)	2016
IELTS ACADEMIC 7.5/9.0	2017

References

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