

# ENAA 2022 - Programme

Faculdade de Ciências da Universidade de Lisboa, 5-6 September 2022

## September 5

09:00

Welcome Address

### Planets and planetary systems (part 1) - Session Chair: Pedro Machado

|       |             |               |  |
|-------|-------------|---------------|--|
| 09:15 | João        | Dias          | Atmospheric evolution and the search for species of astrobiological interest in the Solar System                 |
| 09:30 | Francisco   | Rodrigues     | Identification and Characterization of Morphological evidence associated with Fluvio marine Environments on Mars |
| 09:45 | João        | Ferreira      | Stellar occultation campaign for (65 803) Didymos in Portugal  |
| 10:00 | Tomás       | Silva         | Detection of Barium in the atmospheres of ultra-hot gas giants   |
| 10:15 | <b>Nuno</b> | <b>Santos</b> | <b>Invited Talk</b> - PoET: a solar telescope for planet hunters   |

### 10:45 Posters and Coffee

### Galactic and Extragalactic astronomy - Session Chair: Kora Mužić

|       |          |          |  |
|-------|----------|----------|--|
| 11:15 | Duarte   | Almeida  | Mass loss in Open Clusters   |
| 11:30 | Claudio  | Llinares | Galactic potentials and stellar orbits in AEssence   |
| 11:45 | Sandro   | Moreira  | Scale Height Evolution of the Galactic Disk  |
| 12:00 | Henrique | Miranda  | An investigation of the star-forming main sequence considering the nebular continuum emission at low-z |
| 12:15 | Rodrigo  | Carvajal | Ensemble Machine Learning for the Extraction of High-Redshift Radio Galaxies                           |
| 12:30 | Duarte   | Santos   | FADO and galaxy classification   |
| 12:45 | João     | Duarte   | A Sample of Dust Attenuation Laws for DES Galaxies   |

### 13:00 Lunch

|       |             |              |  |
|-------|-------------|--------------|--|
| 14:00 | <b>João</b> | <b>Alves</b> | <b>Invited Talk</b> - The 3D motion of the ISM with ESO and ESA telescopes |
| 14:30 | Sabyasachi  | Goswami      | Interstellar dust indicators from Integral Field Spectroscopy              |
| 14:45 | João        | Gonçalves    | Extinction curves of type Ia supernovae from the Dark Energy Survey        |

### Cosmology and Gravitation (part 1) - Session Chair: António da Silva

|       |       |             |   |
|-------|-------|-------------|---|
| 15:00 | Inês  | Albuquerque | A designer approach to $f(Q)$ gravity and cosmological implications |
| 15:15 | Tiago | Barreiro    | Testing $f(Q)$ gravity with redshift space distortions              |

**15:30 Posters and Coffee**

|       |                      |          |  |
|-------|----------------------|----------|--|
| 16:00 | Jose Pedro           | Mimoso   | Generalising conformal time                                  |
| 16:15 | Justin               | Feng     | Adventures in automatic differentiation                      |
| 16:30 | José                 | Ferreira | Forecasting F(Q) cosmology with standard sirens              |
| 16:45 | Miguel               | Pinto    | Particle production processes in f(R,T) gravity              |
| 17:00 | Krinio               | Marouda  | Testing GR in collapsing spacetimes                          |
| 17:15 | Inês                 | Rainho   | Linearized General Relativity in hyperboloidal slices        |
| 17:30 | Nelson               | Nunes    | Cosmological constraints on a simple model for varying alpha |
| 18:00 | SPA General Assembly |          |  |
| 20:30 | ENAA Dinner          |          |  |

**September 6**

## Planets and planetary systems (part 2) / Solar and Stellar physics - Session Chair: João Ferreira

|       |              |                  |   |
|-------|--------------|------------------|---|
| 09:00 | Daniela      | Cortes Espadinha | Venus Atmospheric Dynamics: Akatsuki UVI and TNG HARPS-N observations                                     |
| 09:15 | Francisco    | Brasil           | Atmospheric Gravity Waves on Mars using OMEGA/Mars Express images – novel results from systematised study |
| 09:30 | Pedro        | Machado          | Saturn atmosphere's winds with VLT/UVES Doppler velocimetry   |
| 09:45 | José         | Ribeiro          | Preliminary atmospheric study of Jupiter using ISO/SWS data   |
| 10:00 | José Eduardo | Silva            | Jupiter's atmosphere dynamics with Doppler Velocimetry - Exploring the capabilities of VLT/ESPRESSO       |
| 10:15 | Lara         | Piscarreta       | Spectral Characterization of Young Free-floating Planetary-mass Objects                                   |
| 10:30 | Inês         | Rolo             | The Enigma of Li-Rich Giants and its Relation with Stellar Activity                                       |

**10:45 Posters and Coffee**

## Astronomical technology: instrumentation, methods and codes - Session Chair: António Amorim

|       |        |         |  |
|-------|--------|---------|--|
| 11:15 | Manuel | Abreu   | ELT-ANDES, the High Resolution Spectrograph for the ELT and the design of the Instrument Front End |
| 11:30 | Carlos | Martins | An overview of ELT Line Calibrations WG activities   |

|       |         |         |   |
|-------|---------|---------|---|
| 11:45 | Nuno    | Morujão | Adaptive Optics Telemetry   |
| 12:00 | Cédric  | Pereira | VIS/NIR Illumination System for the OGSE of ARIEL Space Mission                     |
| 12:15 | Bachar  | Wehbe   | The Atmospheric Dispersion Compensator of NIRPS, the Near Infra Red Planet Searcher |
| 12:30 | Beatriz | Pereira | Polarization sky patterns   |
| 12:45 | Pedro   | Cunha   | Photometric redshift-aided classification using ensemble learning                   |

### 13:00 Lunch

Astronomy and Society - Session Chair: João Fernandes

|       |             |              |   |
|-------|-------------|--------------|---|
| 14:15 | <b>Rosa</b> | <b>Doran</b> | <b>Invited talk</b> - The power of collaboration in Astronomy Education   |
| 14:45 | Andre       | Moitinho     | Removing barriers from publishing and accessing scientific research: The Astronomy and Astrophysics transition to open access and publishing policies |

Cosmology and Gravitation (part 2) - Session Chair: Justin Feng

|       |       |        |   |
|-------|-------|--------|---|
| 15:00 | Paulo | Garcia | Latest results of the GRAVITY experiment on the Galactic Centre supermassive black hole |
|-------|-------|--------|---|

### 15:15 Posters and Coffee

|       |              |                |   |
|-------|--------------|----------------|---|
| 15:45 | <b>Vitor</b> | <b>Cardoso</b> | <b>Invited talk</b> - The discovery potential of black holes                                  |
| 16:15 | Catarina     | Marques        | Optimization of Spectroscopic Tests of Fundamental Physics: from ESPRESSO to the ELT          |
| 16:30 | Ana          | Carvalho       | Euclid Cluster Abundances as a probe of Non-homogeneous models and the Cosmological Principle |
| 16:45 | João         | Dias           | Constraints on extended Bekenstein models from cosmological, astrophysical, and local data    |
| 17:00 | Ana Mafalda  | Vieira         | Low redshift constraints on a Modified Gravity Model  |

|       |  |  |                    |
|-------|--|--|--------------------|
| 17:15 |  |  | Concluding remarks |
|-------|--|--|--------------------|

|       |  |  |                |
|-------|--|--|----------------|
| 17:20 |  |  | End of meeting |
|-------|--|--|----------------|

## Poster Contributions

### Astronomical technology: instrumentation, methods and codes

Nuno M. Gonçalves Optical design for a prototype of a cross dispersed echelle spectrograph

### Cosmology and Gravitation

Masato Minamitsuji Symmetry restoration in the vicinity of neutron stars with a nonminimal coupling

Samuel Pinto Statistical analysis of different dark energy and modified gravity type models

### Galactic and Extragalactic astronomy

Davi Barbosa A Complete Characterisation of Ultra Steep Spectrum Sources in the COSMOS Field

Gonçalo Fernandes Distribution of young stars observed by the ESA Gaia mission

### Planets and planetary systems

Constança Freire Observations of the (1-0) band of CO in Venus using VIRTIS-H aboard Venus Express

### Solar and Stellar physics

Andreas W. Neitzel Stellar characterization for the Ariel space mission

Victoria Samboco Testando o parâmetro de mistura com binários estelares de eclipse



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