

MAP-Fis Essays Workshop

Report of Contributions

Contribution ID: 0

Type: **not specified**

Invited Talk

Presenter: Prof. FREITAS, Paulo (INL)

Contribution ID: 1

Type: **not specified**

Final Remarks

Presenter: Prof. SCHMOOL, David (Universidade do Porto)

Contribution ID: 5

Type: **not specified**

Palestra 3/Talk 3

Contribution ID: **10**

Type: **not specified**

Welcome

Friday 31 May 2024 09:00 (10 minutes)

Summary

Presenter: VASILEVSKIY, Mikhail (University of Minho)

Session Classification: Opening Session

Contribution ID: 16

Type: **not specified**

Hematite nanowires for solar water splitting: development and structure optimization

Presenter: Dr AZEVEDO, João (Universidade do Porto)

Contribution ID: 19

Type: **not specified**

Exchange coupled donor dimers in nanocrystal quantum dots

Presenter: Dr ALMEIDA, António José (Universidade de Aveiro)

Contribution ID: 20

Type: **not specified**

Palestra de Introdução/Overview Talk

Contribution ID: **21**

Type: **not specified**

Palestra 1/Talk 1

Contribution ID: 22

Type: **not specified**

Palestra 2/Talk 2

Contribution ID: **28**

Type: **not specified**

Properties of topological matter lacking translational invariance

Friday 31 May 2024 09:40 (25 minutes)

Supervisor: Eduardo Filipe Vieira de Castro (UP)

Evaluation Panel: Eduardo Filipe Vieira de Castro, Miguel Araújo (University of Évora)

Summary

Presenter: SANTOS SILVA, João (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 37

Type: **not specified**

Non-linear optical response

Friday 31 May 2024 09:15 (25 minutes)

Supervisor: João Manuel Viana Parente Lopes (UP)

Evaluation Panel: João Manuel Viana Parente Lopes, Yuliy Bludov (UM)

Summary

Presenter: PINHO, João (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 39

Type: **not specified**

Study of the magnetic and vibrational properties of NdFeO₃

Friday 31 May 2024 10:05 (25 minutes)

Supervisor: Estelina Lora Silva, Joaquim Agostinho Moreira (UP)

Evaluation Panel: Estelina Lora Silva, Bernardo Almeida (UM)

Summary

Presenter: AASIM, Muhammad (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 50

Type: **not specified**

Superconductivity in quasiperiodic moiré materials

Friday 31 May 2024 10:30 (25 minutes)

Supervisor: Eduardo V. Castro (UP)

Evaluation Panel: Eduardo V. Castro, António T. Costa (INL)

Summary

Presenter: OLIVEIRA, Ricardo (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 51

Type: **not specified**

Non-linear Evolutions of Black Holes in Numerical Relativity

Friday 31 May 2024 09:40 (25 minutes)

Supervisor: Miguel Zilhão (UA)

Evaluation Panel: Miguel Zilhão (UA), Raimon Luna (UA)

Summary

Presenter: MOTA VALENTE FERREIRA, José Pedro (University of Aveiro)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 52

Type: **not specified**

Extreme mass ratio inspirals around non-Kerr compact objects

Friday 31 May 2024 11:10 (25 minutes)

Supervisor: Carlos Alberto Ruivo Herdeiro (UA)

Evaluation Panel: Carlos Alberto Ruivo Herdeiro, Nicolas Sanchis-Gual (University of Valencia)

Summary

Presenter: MARIANO, Manuel (University of Aveiro)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 53

Type: **not specified**

Deep-Learning Classification and Parameter Inference of Rotational Core-Collapse Supernovae

Friday 31 May 2024 10:05 (25 minutes)

Supervisor: Antonio Onofre, José Antonio Font, Alejandro Torres-Forné

Evaluation Panel: José Antonio Font (University of Valencia), Guilherme Raposo (UA)

Summary

Presenter: NUNES, Solange (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 54

Type: **not specified**

Deep Learning for transient signals in gravitational-wave astronomy

Friday 31 May 2024 10:30 (25 minutes)

Supervisor: Antonio Onofre, Jose Antonio Font, Alejandro Torres-Forné

Evaluation Panel: Jose Antonio Font (University of Valencia), Nuno Castro (UM)

Summary

Presenter: FERNANDES, Tiago (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 55

Type: **not specified**

Solving the Hubble tension with nonminimally coupled $f(R)$ theories of gravity

Friday 31 May 2024 09:15 (25 minutes)

Supervisor: Orfeu Bertolami (UP)

Evaluation Panel: Orfeu Bertolami (UP), Guilherme Raposo (UA)

Summary

Presenter: BARROSO VARELA, Miguel (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 56

Type: **not specified**

Accretion patterns from exotic compact objects

Friday 31 May 2024 11:35 (25 minutes)

Supervisor: Antonio Onofre, Héctor Raúl Olivares Sánchez, Antonio Jose Font

Evaluation Panel: Héctor Raúl Olivares Sánchez (UA), Pedro Cunha (UA)

Summary

Presenter: PASSOS, Pedro (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 57

Type: **not specified**

Machine learning anomaly detection techniques for the search of new signals at LHC with ATLAS experiment

Friday 31 May 2024 12:00 (25 minutes)

Supervisor: Nuno Castro, Rute Pedro

Evaluation Panel: Nuno Castro (UM), António Morais (UA)

Summary

Presenter: BERTI, Annalisa (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 58

Type: **not specified**

Dusty Atmospheric Rivers: relationship between intense transport of water vapour and aerosols in the Iberian Peninsula

Friday 31 May 2024 11:10 (25 minutes)

Supervisor: Carla Maria dos Santos Gama da Silva, Irina Gorodetskaya

Evaluation Panel: Carla Maria dos Santos Gama da Silva (UA), José Castaneira (UA)

Summary

Presenter: LUÍS, Diogo (University of Aveiro)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 59

Type: **not specified**

Impactos das alterações climáticas na formação de Cold Air Pools na Região Demarcada do Douro

Friday 31 May 2024 11:35 (25 minutes)

Supervisor: David João da Silva Carvalho, João Carlos Andrade Santos, António Graça

Evaluation Panel: David João da Silva Carvalho (UA), Alfredo Rocha (UA)

Summary

Presenter: TEIXEIRA, Marta (University of Aveiro)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: **60**

Type: **not specified**

TO BE DETERMINED

Friday 31 May 2024 12:00 (25 minutes)

Supervisor:

Evaluation Panel:

Summary

Presenter: CHIAHA, SHEDRACH (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: **61**

Type: **not specified**

Emergence of novel properties at the interfaces in oxide heterostructures and superlattices

Friday 31 May 2024 14:00 (25 minutes)

Supervisor: Luis Silvino Alves Marques (UM)

Evaluation Panel: Luis Silvino Alves Marques, José Coutinho (UA)

Summary

Presenter: SILVA, Alexandre (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 62

Type: **not specified**

Naturally Layered Ruddlesden-Popper Ferroelectrics towards Energy Efficient Materials

Friday 31 May 2024 14:25 (25 minutes)

Supervisor: Armandina Lima Lopes (UP)

Evaluation Panel: Armandina Lima Lopes, José Pedro Basto (UM)

Summary

Presenter: CESÁRIO, António (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 63

Type: **not specified**

Biofunctional Cyclic Dipeptide Nanofibers for Energy Harvesting and Nonlinear Optical Conversion

Friday 31 May 2024 14:50 (25 minutes)

Supervisor: Bernardo Almeida (UM)

Evaluation Panel: Bernardo Almeida, André Pereira (UP)

Summary

Presenter: SANTOS, Daniela (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: **64**

Type: **not specified**

Spatially and temporally modulated active patch for skin cancer treatment

Friday 31 May 2024 15:15 (25 minutes)

Supervisor: Clarisse Marta de Oliveira Ribeiro (UM)

Evaluation Panel: Clarisse Marta de Oliveira Ribeiro, Marlene Lúcio (UM)

Summary

Presenter: BOGAS, Diana (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 65

Type: **not specified**

Remediação ambiental

Friday 31 May 2024 15:40 (25 minutes)

Supervisor: Senentxu Lanceros-Méndez (UM)

Evaluation Panel: Senentxu Lanceros-Méndez, Mario Rui Pereira (UM)

Summary

Presenter: BOANO, Paulo (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 66

Type: **not specified**

Coding the Cosmos, Searching for Superstrings

Friday 31 May 2024 15:40 (25 minutes)

Supervisor: Carlos Martins (UP)

Evaluation Panel: Carlos Martins, António Morais (UA)

Summary

Presenter: HEILEMANN, Ricarda (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 67

Type: **not specified**

Bootstrap and Holographic CFTs

Friday 31 May 2024 14:00 (25 minutes)

Supervisor: Vasco Gonçalves (UP)

Evaluation Panel: Vasco Gonçalves, Eduardo Castro (UP)

Summary

Presenter: SERRANO, Filipe (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: **68**

Type: **not specified**

Gravitational echoes from primordial phase transitions

Friday 31 May 2024 15:15 (25 minutes)

Supervisor: António Morais (UA)

Evaluation Panel: António Morais, António Onofre (UM)

Summary

Presenter: FINETTI, Marco (University of Aveiro)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: **69**

Type: **not specified**

A multi-point bootstrap approach to Quantum Field Theory

Friday 31 May 2024 14:25 (25 minutes)

Supervisor: Miguel Costa (UP)

Evaluation Panel: Miguel Costa, Bruno Amorim (UM)

Summary

Presenter: RODRIGUES, Ricardo (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 70

Type: **not specified**

Light and Ultralight Dark Matter: exploring novel synergies between particle physics, strong gravity and cosmology

Friday 31 May 2024 14:50 (25 minutes)

Supervisor: António Morais

Evaluation Panel: António Morais (UA), Vasco Gonçalves (UP)

Summary

Presenter: OLIVEIRA, Vinícius

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 71

Type: **not specified**

Combined local probe technique and ab-initio calculation on layered Perovskites

Friday 31 May 2024 16:20 (25 minutes)

Supervisor: João Pedro Esteves Araújo (UP)

Evaluation Panel: João Pedro Esteves Araújo, António Luís Ferreira (UA)

Summary

Presenter: SILVA DE SOUSA, Pedro Alexandre (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 72

Type: **not specified**

Understanding anomalies in liquid water with upconversion thermometry

Friday 31 May 2024 16:45 (25 minutes)

Supervisor: Luís António Ferreira Martins Dias Carlos (UA)

Evaluation Panel: Luís António Ferreira Martins Dias Carlos, Joel Borges (UM)

Summary

Presenter: FILHO, Ramon

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 73

Type: **not specified**

Advanced Photoelectrodes in Photoelectrochemical Cells for Solar Water Splitting and Green Hydrogen Generation

Friday 31 May 2024 17:10 (25 minutes)

Supervisor: Arlete Ondina Alves da Silva Apolinário (UP)

Evaluation Panel: Arlete Ondina Alves da Silva Apolinário, Luís Carlos (UA)

Summary

Presenter: GONÇALVES, Sofia (University of Porto)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 75

Type: **not specified**

Insect-Brain Inspired Neuromorphic Nanophotonic Devices

Friday 31 May 2024 16:20 (25 minutes)

Supervisor: Bruno Romeira (INL), Michael Belsley (UM)

Evaluation Panel: Bruno Romeira, Ariel Guerreiro (UP)

Summary

Presenter: AZEVEDO, João (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 76

Type: **not specified**

Hybrid optical fiber sensors interfaced with interfaced with micro/nano fabrication technologies: towards a multisensing platform

Friday 31 May 2024 16:45 (25 minutes)

Supervisor: Marta Sofia dos Anjos Ferreira (UA)

Evaluation Panel: Marta Sofia dos Anjos Ferreira, João Pedro Alpuim (UM)

Summary

Presenter: SANTOS, João (University of Aveiro)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 77

Type: **not specified**

Development of polarimetric remote sensing technique for road condition inquiry and fast probing

Friday 31 May 2024 17:10 (25 minutes)

Supervisor: José Carlos Viana Gomes (UM)

Evaluation Panel: José Carlos Viana Gomes, Nikolay Sobolev (UA)

Summary

Presenter: ROMANYSHYN, Nazar (University of Minho)

Session Classification: MAP-Fis Essays Presentations

Contribution ID: 78

Type: **not specified**

Versatile Neuromorphic Frameworks for Optical Computing

Friday 31 May 2024 17:35 (25 minutes)

Supervisor: Nuno Miguel Azevedo Silva (UP)

Evaluation Panel: Nuno Miguel Azevedo Silva, Mikhail Vasilevskiy (UM)

Summary

Presenter: ROCHA, Vicente (University of Porto)

Session Classification: MAP-Fis Essays Presentations