

Maths for Agriculture

Trends and Challenges

Coimbra, June 7, 2024

LIST OF POSTERS

1. Two novel *Pseudomonas* species isolated from kiwifruit leaves

S. Rodrigues, D. Figueira, C. Rodrigues, C. Espírito Santo, J. Trovão, E. Garcia, **J. Costa (DCV-FCTUC & IPN - Fiolab)**

2. I9KIWI – A Decision Support System for Agriculture 4.0

J. Costa (DCV- FCTUC & IPN - Fiolab), E. Garcia, M. Ferreira, C. Lopes

3. Integrating Morphological and Molecular Approaches for Assessing Soil Biodiversity in Agroecosystems

L.F. Dornellas (CFE - FCTUC), V.A. Mata, M. Bartz, R. Leitão, E. Nascimento, S. Mendes, J. Costa, J.P. Sousa, L. Cunha

4. Long-read metabarcoding approach for diagnosis and epidemiology in genetically heterogeneous *Prunus* sp. orchards

E. Garcia (IPN- Fitolab – PhD Student FCTUC), D. Figueira, J. Trovão, A. Barateiro, C. Ramos, P. Fragoso, S. Lopes, A. Camelo, I. Brandão, A. Veríssimo, C. Espírito-Santo, J. Costa

5. Endophytic microbiomes of wild plants susceptible to *Xylella fastidiosa* infection

R. Ramos (IPN - Fitolab), A. Camelo, A. Garcia, S. Rodrigues, J. Trovão, I. Brandão, C. Espírito Santo, J. Costa

6. Enhancing Agricultural Decision-Making with Short-Term Maximum Temperature Forecasts Using State-Space Models

F. Catarina Pereira (University of Minho, Centre of Mathematics), A. Manuela Gonçalves (University of Minho, Department of Mathematics and Centre of Mathematics), Marco Costa (University of Aveiro, Águeda School of Technology and Management, Centre for Research and Development in Mathematics and Applications), Sofia O. Lopes (University of Minho, Department of Mathematics, Centre of Physics and SYSTEC)

7. Typological characterization of Portuguese farms based on a FADN Database

Cândida Maria Veiga Rodrigues Santos (Instituto Superior Técnico), Maria do Rosário de Oliveira Silva (Instituto Superior Técnico, Dep. Matemática), José Manuel Gonçalves Dias (ISCTE-IUL, Dep. de Métodos Quantitativos para Gestão e Economia), Pedro Arnaldo de Sousa, Silva Reis (Instituto Nacional de Investigação Agrária e Veterinária, I.P.)

8. An integrated framework to assess the territorial resilience in winemaking regions: the case of the Douro Valley

V. Assuma (Department of Architecture, University of Bologna, Italy), M. Bottero (DIST, Politecnico di Torino, Italy), E. De Angelis (DIST, Politecnico di Torino, Italy), **A. J. Soares (Centre of Mathematics, University of Minho)**

9. Deep Learning Strategies for Pest Detection

Dinis Costa (CISUC - Centre for Informatics and Systems of the University of Coimbra), Catarina Silva (CISUC - Centre for Informatics and Systems of the University of Coimbra), Joana Costa (CISUC - Centre for Informatics and Systems of the University of Coimbra), Bernardete Ribeiro (CISUC - Centre for Informatics and Systems of the University of Coimbra)

10. Determining the spatial variability of chlorophyll content. Bairrada region, Chardonnay variety

Lúcio Paiva (Departamento Ciências da Vida, Universidade de Coimbra), Filipe Melo (CERNAS - Centro de Estudos de Recursos Naturais, Ambiente e Sociedade, Escola Superior Agrária, Instituto Politécnico de Coimbra), Luís Coelho (CERNAS - Centro de Estudos de Recursos Naturais, Ambiente e Sociedade, Escola Superior Agrária, Instituto Politécnico de Coimbra), María Jesús García García (Grupo de Investigación geoespacial y dinámicas territoriales para la sostenibilidad, Universidad Politécnica de Madrid)

11. Parametric optimal control problems applied to agricultural irrigation

Ana Paião (CIDMA, Universidade de Aveiro), Sofia O. Lopes (Centro de Física das Universidades do Minho e do Porto, Departamento de Matemática da Universidade do Minho), M. d. R. de Pinho (Universidade do Porto, Faculdade de Engenharia, DEEC, SYSTEC, ISR)

12. Inovação Agrícola Através da Detecção Remota

Jorge Pereira (TeroMovigo - Earth Innovation), Ana Margarida (Universidade da Beira Interior), Álvaro Pinheiro (TeroMovigo - Earth Innovation), Tiago Afonso (TeroMovigo - Earth Innovation), **Machiel Bos (TeroMovigo - Earth Innovation)**, João Neves (Universidade da Beira Interior), André Sá (TeroMovigo - Earth Innovation, Instituto Politécnico da Guarda)

13. Deep Learning-based Multi-scale Observation for Precision Agriculture

T. Barros (University of Coimbra, Institute of Systems and Robotics), W. Cardoso (University of Coimbra, Institute of Systems and Robotics), P. Conde (University of Coimbra, Institute of Systems and Robotics), G. Gonçalves (University of Coimbra, INESC Coimbra), C. Premebida (University of Coimbra, Institute of Systems and Robotics), U.J. Nunes (University of Coimbra, Institute of Systems and Robotics)