

Yorgos Felekis

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EDUCATION

Doctor of Philosophy (Ph.D.), Machine Learning

Oct. 2022 – present

University of Warwick

Coventry, UK

- Area: Causality, Causal Representation Learning, Digital Twins
- Advisor: [Prof. Theodoros Damoulas](#)
- Member of the [Warwick Machine Learning Group](#)
- [Enrichment student](#) at the [Alan Turing Institute](#) (*Oct. 2024 – Jun. 2025*)
- Research internship at [Spotify](#), London, UK (*Jun. 2025 – Aug. 2025*)

Master of Science (M.Sc.), Machine Learning

Sep. 2019 – Sep. 2020

University College London - UCL

London, UK

- Degree awarded with Distinction
- Thesis: “[Generalised Variational Inference posteriors in Probabilistic Deep Learning](#)” (Distinction)
- Area: Probabilistic Machine Learning, Bayesian Inference
- Advisors: [Prof. Theodoros Damoulas](#) and [Prof. Brooks Paige](#)

Bachelor of Science (B.Sc.), Mathematics

Oct. 2014 – Jul. 2019

National and Kapodistrian University of Athens

Athens, GR

- Degree awarded with First Class Honours
- Specialization Area: Applied and Computational Mathematics

PUBLICATIONS

Distributionally Robust Causal Abstractions

2025

- [Felekis Y.](#), [Damoulas T.](#), [Giampouras P.](#), *arXiv preprint*

Causal Abstraction Learning based on the Semantic Embedding Principle

2025

- [D'Acunto G.](#), [Zennaro F.M.](#), [Felekis Y.](#), [Di Lorenzo P.](#), *International Conference on Machine Learning (ICML), 2025*

Causal Optimal Transport of Abstractions

2024

- [Felekis Y.](#), [Zennaro F.M.](#), [Branchini N.](#), [Damoulas T.](#), *Causal Learning and Reasoning (CLearR), 2024*

Interventionally Consistent Surrogates for Agent-based Simulators

2024

- [Dyer J.](#), [Bishop N.](#), [Felekis Y.](#), [Zennaro F.M.](#), [Calinescu A.](#), [Damoulas T.](#), [Wooldridge M.](#), *Neural Information Processing Systems (NeurIPS), 2024*

Causally Abstracted Multi-armed Bandits

2024

- [Zennaro F.M.](#), [Bishop N.](#), [Dyer J.](#), [Felekis Y.](#), [Calinescu A.](#), [Wooldridge M.](#), [Damoulas T.](#), *Uncertainty in Artificial Intelligence (UAI), 2024*

Probabilistic Deep Learning with Generalised Variational Inference

2022

- [Felekis Y.](#), [Damoulas T.](#), [Paige B.](#), *4th Symposium on Advances in Approximate Bayesian Inference (AABI), 2022*

The generalized λ -Constant Function Market Makers

2022

- [Felekis Y.](#), [Kristensen J.](#), *IEEE Blockchain, 2022*

Cryptocurrency price prediction with Multi-task Multi-step Sequence-to-Sequence Modeling

2022

- [Kristensen J.](#), [Madrigal-Cianci J.P.](#), [Felekis Y.](#), [Liatsikou M.](#), *IEEE Blockchain, 2022*

Deep Learning for Agricultural Land Detection in Insular Areas

2019

- [Charou E.](#), [Felekis Y.](#), [Bournou D.](#), [Maria Koutsoukou M.](#), [Panagiotopoulou A.](#), [Voutos Y.](#), [Bratsolis E.](#), [Mylonas P.](#), [Likforman-Sulem L.](#), *10th International Conference on Information, Intelligence, Systems and Applications (IISA), 2019*

EXPERIENCE

Research Intern

Jun. 2025 – Aug. 2025

Spotify

London, UK

- Work at the Advanced Causal Inference lab under the supervision of Dr. Ciarán Gilligan-Lee.

Research Engineer

Jan. 2022 – Aug. 2022

Advanced Blockchain AG

Berlin, DE

- Work on the intersection of Artificial Intelligence and Blockchain technology and the mathematical aspects of DeFi. Specifically, study of the Automated Market Makers' dynamics via Multi-agent Reinforcement Learning Simulations and Adversarial Learning.
- Organizer of the weekly Research seminar (paper reviews, invited talks, brainstorming sessions).

Machine Learning Engineer

Aug. 2021 – Jan. 2022

Ernst & Young (EY)

Athens, GR

- Work on AI-related platforms and technologies with a focus on Natural Language Processing and Natural Language Understanding at the IBM TechHub of EY. In particular, the work was focused on Text Classification, Document Retrieval, QA, and summarization tasks.

Machine Learning Engineer

Jan. 2021 – Jun. 2021

LangAware

Athens, GR

- Design and develop productised and deployed machine learning models for predicting neurodegenerative diseases with Natural Language Processing techniques. Specifically, work on Dementia, Alzheimer and Parkinson's diseases.

Visiting Researcher

Sep. 2019 – Sep. 2020

National Centre for Scientific Research "Demokritos"

Athens, GR

- Mentoring and supervising internship projects of undergraduate students, as part of their BSc Diploma.

Research Scientist

Dec. 2018 – Aug. 2019

National Centre for Scientific Research "Demokritos"

Athens, GR

- Experimentation with Transfer Learning techniques with popular neural network architectures (AlexNet, ResNet, VGG16).
- Creation of a Sentinel-2A based dataset called "Ionio dataset" and training of a Convolutional Neural Network in order to classify Agricultural and Non-Agricultural land cover.
- Organise multiple workshops as the main speaker for students and researchers on Deep Learning techniques and their applications to Remote Sensing.

Research Intern

Aug. 2018 – Dec. 2018

National Centre for Scientific Research "Demokritos"

Athens, GR

- Literature review of SOTA Deep Learning models for remote sensing image processing and satellite imagery.

HONOURS & AWARDS

Alan Turing Institute Placement Award

Oct. 2024 – Jun. 2025

- Awarded as part of the Enrichment Scheme, to PhD students from across the UK to spend 9 months in the Alan Turing Institute.

Fully funded PhD position

Oct. 2022 – Apr. 2026

- Awarded via the UKRI Turing AI Acceleration Fellowship [EP/V02678X/1]: "Machine Learning Foundations of Digital Twins", awarded to Prof. Theodoros Damoulas

Onassis Scholarship for Doctoral Studies

Oct. 2022 – Oct. 2025

- Awarded in recognition of outstanding academic performance.

SUPERVISION

Luke Padmore, MSci Data Science Thesis

Oct. 2024 – Jul. 2025

co-supervise with Prof. Theo Damoulas and Prof. Fabio M. Zennaro

University of Warwick

Tanatip Tintong, BSc Computer Science Thesis

Jul. 2022 – Apr. 2023

co-supervise with Prof. Theo Damoulas

University of Warwick

Mary Karatzoglidi, Research Internship

Sep. 2019 – Jan. 2020

co-supervise with Dr. Eleni Charou

NCSR "Demokritos"

TALKS & POSTERS

From Patterns to Principles: Towards Causal and Scientific AI <i>AI and Society symposium</i>	Jun. 2025 <i>University of Warwick, Coventry, UK</i>
Towards Causal Neuroabstractions <i>NeuroAI seminar series</i>	Feb. 2025 <i>The Alan Turing Institute, London, UK</i>
Interventionally Consistent Surrogates for Complex Simulation Models (poster) <i>Annual Conference on Neural Information Processing Systems</i>	Dec. 2024 <i>Vancouver, CA</i>
Causal Optimal Transport of Abstractions <i>Causal Club reading group</i>	Dec. 2024 <i>University of Pisa, Pisa, IT</i>
Think, Reason and Learn in Multi-Scale Causal Systems <i>CS & Stats PhD research seminar</i>	Nov. 2024 <i>University of Warwick, Coventry, UK</i>
Causal Optimal Transport of Abstractions <i>Algorithms & Computationally Intensive Inference Seminar</i>	May 2024 <i>University of Warwick, Coventry, UK</i>
Causal Optimal Transport of Abstractions <i>Stanford AI Lab</i>	Apr. 2024 <i>Stanford University, Palo Alto, CA, USA</i>
Causal Optimal Transport of Abstractions (poster) <i>Causal Learning and Reasoning (CLear)</i>	Apr. 2024 <i>UCLA, Los Angeles, CA, USA</i>
Bridging micro and macro causal realms <i>Warwick Postgraduate Colloquium in Computer Science</i>	Dec. 2023 <i>University of Warwick, Coventry, UK</i>
Probabilistic Deep Learning with Generalised Variational Inference (poster) <i>4th Symposium on Advances in Approximate Bayesian Inference</i>	Feb. 2022 <i>Virtual Event</i>
MSc Thesis Presentation <i>NCSR "Demokritos" Machine Learning seminar series</i>	Jan. 2021 <i>NCSR "Demokritos", Athens, GR</i>
Machine Learning methods for satellite image processing <i>55th Summer School of NCSR "Demokritos"</i>	Jul. 2020 <i>NCSR "Demokritos", Athens, GR</i>
Deep Learning for Agricultural Land Detection in Insular Areas <i>10th International Conference on Information, Intelligence, Systems and Applications</i>	Jul. 2019 <i>University of the Peloponnese, Patras, GR</i>
Deep Learning trends & techniques <i>Computational Intelligence Lab seminar</i>	Sep. 2019 <i>NCSR "Demokritos", Athens, GR</i>
Convolutional Neural Networks for Land Use Land Cover classification <i>Computational Intelligence Lab seminar</i>	May 2019 <i>NCSR "Demokritos", Athens, GR</i>

ORGANIZATION

Causal Abstractions and Representations workshop <i>Workshop at the conference on Uncertainty in Artificial Intelligence (UAI)</i>	Jul. 2025 <i>Rio de Janeiro, BR</i>
Interdisciplinary AI and Society Symposium <i>Social laws, social dynamics and concepts of society.</i>	Jun. 2025 <i>University of Warwick, Coventry, UK</i>
Physics-informed Machine Learning seminar series <i>Explores real-world applications of Φ-ML methods to the engineering practice.</i>	Nov. 2024 – Jun. 2025 <i>The Alan Turing Institute, London, UK</i>
Advanced Topics in Machine Learning WMLG reading group <i>Focus: Causality, Robustness, Statistical Machine Learning.</i>	Jan. 2023 – Jan. 2025 <i>University of Warwick, Coventry, UK</i>
Three-day Hackathon <i>Causal discovery for cancer; Learning to run a power network; Low cost climate prediction</i>	Apr. 2023 <i>University of Cambridge, Cambridge, UK</i>
Computational Intelligence Lab seminar <i>Organized workshops, seminars and invited talks</i>	May. 2019 – Sep. 2019 <i>NCSR "Demokritos", Athens, GR</i>

ACADEMIC SERVICE

- AAAI Conference on Artificial Intelligence
- Conference on Uncertainty in Artificial Intelligence (UAI)
- International Joint Conference on Artificial Intelligence (IJCAI-ECAI)

TECHNICAL SKILLS

Languages & Developer Tools: Python, Matlab, Julia, Git, Google Cloud Platform, IBM Watson
Libraries: PyTorch, Keras, Scikit-learn, Pandas, NumPy, Matplotlib

LANGUAGES

Greek: Native **English:** Fluent **French:** Intermediate **Italian:** Beginner