Atalanti A. Mastakouri

Tübingen, Germany ▪ https://www.linkedin.com/in/atalanti-mastakouri-366516228/

Work Experience

01/2021 - Present	**Applied Scientist, Lablets**
	AWS Research, Tübingen, Germany
	Causal Inference Group

5 months, 10/2019-2/2020	**Applied Science Internship, AWS Deep Engine-Science**
	Amazon Research Tübingen, Germany
	Causality Group.
	Evaluation: "Outstanding and profound knowledge and great expertise"

Education

11/2016 - 10/2020

PhD
Max Planck Institute for Intelligent Systems - Empirical Inference Department, Tübingen, Germany
Topic: Causal feature selection in neuroscience
Field: Machine learning, Causal inference, Neuroscience
Description: Development of causal feature selection methods for Electroencephalographic (EEG) data.
Application of machine learning and signal processing techniques for EEG data analysis.
Design and conduct of EEG and non-invasive brain stimulation experiments for studying humans' motor cortex.

10/2010 - 7/2015

Diploma in Electrical and Computer Engineering (ECE)
National Technical University of Athens (N.T.U.A.), Greece
GPA: 9.30/10 (10 is the highest), Excellent, ranked top 3%
Diploma: BSc + MSc equivalent (10 semesters curriculum, 300 ECTS)
Direction: Electronics and Systems
Sub-directions:

- Computational Systems
- Electronics, Circuits, Materials
- Bioengineering
- Telecommunications

Advisors: Prof. Konstantina S. Nikita, MD, PhD N.T.U.A., Post doc. research fellow Konstantinos Michmizos, Harvard Medical School, doctoral Associate at MIT
Master Thesis: Auditory brain activity analysis with EEG source space imaging using the Dynamic Statistical Parametric Maps method and computation of the functional connectivity at the sensor space with Phase Locking Value method

Publications

- **Toward Falsifying Causal Graphs Using a Permutation-Based Test**, Elias Eulig, Atalanti A. Mastakouri, Patrick Blöbaum, Michaela Hardt, Dominik Janzing, Arxiv, 2023

- **Causal Information Splitting: Engineering Proxy Features for Robustness to Distribution Shifts**, Bijan Mazaheri, Atalanti A. Mastakouri, Dominik Janzing, Mila Hardt, in Proceedings of Conference for Uncertainty in Artificial Intelligence (UAI), 2023

- **Bounding probabilities of causation through the causal marginal problem**, Numair Sani, Atalanti A. Mastakouri, Dominik Janzing, Arxiv, 2023

- **DoWhy-GCM: An extension of DoWhy for causal inference in graphical causal models**, Patrick Blöbaum, Peter Götz, Kailash Budhathoki, Atalanti A. Mastakouri, Dominik Janzing, Arxiv, 2022

- **Quantifying intrinsic causal contributions via structure preserving interventions**, Dominik Janzing, Patrik Blöbaum, Lenon Minorics, Philipp Faller, Atalanti A. Mastakouri, ArXiv, 2021

- **Necessary and sufficient conditions for causal feature selection in time series with latent common causes**, Atalanti A. Mastakouri, Bernhard Schölkopf, Dominik Janzing, 38th International Conference on Machine Learning (ICML), 2021

- **Causal Feature Selection in Neuroscience**, Anastasia Atalanti Mastakouri, University of Tuebingen, Max Planck Institute for Intelligent Systems, Germany, 2020

- **Causal analysis of Covid-19 Spread in Germany**, Atalanti A. Mastakouri, Bernhard Schölkopf, 34th Conference on Neural Information Processing Systems (NeurIPS), 2020

- **Selecting causal brain features with a single conditional independence test per feature**, Atalanti A. Mastakouri, Bernhard Schölkopf, Dominik Janzing, 33rd Conference on Neural Information Processing Systems (NeurIPS), 2019

- **Beta Power May Mediate the Effect of Gamma-TACS on Motor Performance**, Atalanti A. Mastakouri, Bernhard Schölkopf, Moritz Grosse-Wentrup, 41st IEEE International Engineering in Medicine and Biology Conference (EMBC), Berlin, Germany 2019

- **Personalized brain-computer interface models for motor rehabilitation**, Atalanti A. Mastakouri, Sebastian Weichwald, Ozan Özdenizci, Timm Meyer, Bernhard Schölkopf, Moritz Grosse-Wentrup, IEEE International Conference on Systems, Man, and Cybernetics (SMC), Banff, Alberta, Canada 2017

- **Stratification of behavioral response to transcranial current stimulation by resting-state electrophysiology**, Atalanti A. Mastakouri, arXiv, 2020

Distinctions

- Invitation to contribute a book chapter for Causal Inference on time series
- **3rd most read paper** across Amazon for 2021
- **5th most read science blog** across Amazon for 2021
- Selected as "**Highlighted Reviewer** of ICLR 2022"
- **Personal invitation by the Mathematisches Forschungsinstitut Oberwolfach** for the ELLIS Workshop on Interactive Learning and Interventional Representations (Germany, 2020)
- **Award of 1000 Euros** for achieving the **highest grade of access in the university (19729/20000 points) in high school**, Bank of Eurobank, Athens, Greece
- **16th/300 order of entry** at the Dept. of Electrical and Computer Engineering of National Technical University of Athens
- **14th/466 order of graduation** from the Dept. of Electrical and Computer Engineering of the National Technical University of Athens **(top 3%)**

Invited talks

- Invited talk at Thematic Quarter on Causality - When Causal Inference meets Statistical Analysis, Institute Henri Poincaré, Paris, France, April 18th, 2023

- Invited keynote talk at the Workshop for Causal Dynamics, NeurIps 2023

- Invited Talk at EPFL, Medical Image Processing Lab, December 2021

- Invited Talk at Copenhagen Causality Lab (CoCaLa), April 2021

Service

- Reviewer for Nature Communications

- Social Co-Chair for CLeaR 2023

- Reviewer for NeurIps 2023

- Social Co-Chair for CLeaR 2022

- Reviewer for International Conference on Learning Representations 2022

- Reviewer for Neural Information Processing Conference 2021

- Reviewer for PLOS Biology

- Reviewer for Human Brain Mapping Journal

- Invited Program Chair for IJCAI 2020

Internships/ Summer Schools

1 week, 9/2019	**Attendance of Machine Learning Frontiers in Precision Medicine**
	Organized by ETH, FHNW Muttenz, Basel, Switzerland
2 weeks, 8/2018	**Attendance of Machine Learning Summer School**
	Machine Learning Summer School, Universidad Autónoma de Madrid, Madrid, Spain
3/2016 - 9/2016	**Graduate Junior Researcher**
	Defitech Chair in Brain - Machine Interface CNBI of Interfaculty Institute of Bioengineering, Ecole Polytechnique Federal de Lausanne, Switzerland (E.P.F.L.)
	Advisors: Prof. José del R. Millán
10/2015 - 3/2016	**Graduate Internship**
	Max Planck Institute for Intelligent Systems, Empirical Inference Department
	Advisors: Prof. Moritz Grosse-Wentrup, Prof. Bernhard Schölkopf
	Topic: Brain-controlled rehabilitation robots
6/2015 - 7/2015	**Undergraduate Researcher**
	National Technical University of Athens (N.T.U.A.) and University of Mental Health Research Institute
	Advisors: Dr. Maria Christopoulou, Prof. Konstantina Nikita
	Summary: Co-design and conduct of an EEG psychoacoustic experiment aiming to study the impact of cell phones radiation at the auditory function

Technical Skills

- **Programming Languages:** Python (advanced), Matlab (advanced), C (intermediate), Pascal (basic)
- **Platforms:** Git, LaTeX, Unity
- **Operating systems:** Linux, Windows

Languages

- **Greek**: Native
- **English:** Proficient (Cambridge Certificate of Proficiency in English, Michigan Certificate of Proficiency in English)
- **French:** Fluent (Delf B2)
- **German:** Basic