

SKILLS

Artificial Intelligence Machine Learning **Deep Learning Graph Neural Networks Recurrent Neural Networks Long Short-Term Memory Units Bayesian Neural Networks Probabilistic Neural Networks Ensemble Learning Feature Fusion Transfer Learning Power System Operation Power System Analysis Distribution Network Flexibility Power System Dynamics Dynamic Equivalent Networks** Optimization **Dynamic Programming Control Systems** System Identification Path Planning Algorithms **Natural Language Processing** Natural Language Understanding **Data Augmentation**

LANGUAGES

Greek - Native Language

English – Fluent (IELTS C1)

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Demetris Chrysostomou

D. Chrysostomou is passionate about leveraging artificial intelligence to modernize and optimize energy systems. His research focuses on data-driven models that improve grid reliability, stability, and efficiency. By integrating machine learning with energy system engineering, he aims to advance smarter, more resilient, and sustainable energy infrastructures.

WORK EXPERIENCE

Ph.D. Candidate – TU Delft

Oct. 2021 - Present

- Ph.D. in Machine Learning for Control Coordination for Transmission and Distribution Grid Operation
- Al Energy lab of IEPG Group.
- MegaMind project researcher:
 - Funded by the NWO.
 - Project partners: TU Delft, TU Eindhoven, Tilburg University, University of Twente, TNO, IBM, PWC, Transdev, Enexis, Stedin, Aliander, Smart State Technology, TenneT, Equans.
- Teacher Assistant on the "Intelligent Electrical Power Grids" MSc Course at TU Delft, 2022, 2023.
- Energy Expert at PWC "Data Analytics" Workshop in Amsterdam, the Netherlands, 2022.
- Workshop Tutor for "Graph Neural Networks in Power Systems" in AIT, Vienna, Austria, 2023.
- Workshop Tutor for "Best Coding Practices" for the AI Energy Lab at TU Delft, the Netherlands, 2023.
- Supervisor for MSc thesis on "Data-Driven Adaptive Dynamic Equivalent of Active Distribution Networks."
- Secretary of TU Delft IEEE PES Chapter since 2024

R&D Intern - ABB Corporate Research

Mar. 2020 - Sep. 2020

- Research and Development at the Cyber-Physical Systems Group.
- Devised machine learning models and application logic for Al-assisted automated security testing for industrial automation systems.
- Designed software architecture for proof of concept (POC) and documented a technical summary.
- Utilized Artificial Intelligence, Natural Language Processing, and Natural Language Understanding.

Research Assistant - PSM Laboratory, UCY

Jun. 2015 - Aug. 2018

Part-time participation in research projects.

External Evaluation Committee Member – CYQAA

May. 2018 - Jul. 2018

The Cyprus Agency of Quality Assurance and Accreditation in Higher Education.

Soldier- Cyprus National Guard

Jun. 2012 - Jun. 2014

EDUCATION

Robotics, Systems and Control MSc - ETH Zurich

Sep. 2018 – Jun. 2021

- Thesis: "Optimal learning task paths for neural networks"
 - Supervisors: Dr. Julian Zilly, Dr. Andrea Censi, Prof. Emilio Frazzoli
- Semester Project: "Impact of Inverter-Based Generation on Islanding Detection Schemes in Distribution Networks"
 - Supervisors: Dr. Uros Markovic, Dr. Petros Aristidou, Prof. Gabriela Hug
- Modules Include Autonomous Mobility on Demand, Dynamic Programming and Optimal Control, Recursive Estimation, Introduction to Machine Learning, Probabilistic Artificial Intelligence, System Identification, Theory of Robotics and Mechatronics, and Linear Systems Theory.
- GPA 5.24 out of 6

Electrical Engineering BSc - University of Cyprus

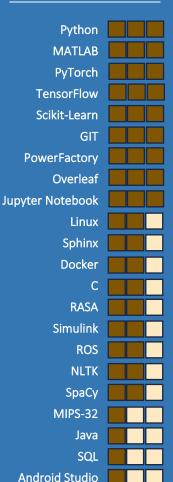
Sep. 2014 – Jun. 2018

Excellent Performance - GPA 9.03 out of 10 (Top 3 of the Electrical and Computer Engineering Class)





TOOLS & LEVEL



HOBBIES

Painting: Hosted two personal art exhibitions.





Tel.: +357 99 802 998 | Email 1: D.chrysostomou@tudelft.nl | Email 2: dchrys01@outlook.com JOURNAL PUBLICATIONS

D. Chrysostomou, J. L. R. Torres and J. L. Cremer, "TensorConvolutionPlus: A Python package for distribution system flexibility area estimation", in SoftwareX 2025.

D. Chrysostomou, J. L. R. Torres and J. L. Cremer, "Tensor Convolution-Based Aggregated Flexibility Estimation in Active Distribution Systems", in IEEE Transactions on Smart Grid, 2024.

M. Chrysostomou, N. Christofides, D. Chrysostomou. "A Novel Machine Learning-Based Load-Adaptive Power Supply System for Improved Energy Efficiency in Datacenters". IEEE Access, 2021.

U. Markovic, D. Chrysostomou, G. Hug, P. Aristidou, "Impact of Inverter-Based Generation on Islanding Detection Schemes in Distribution Networks", Electric Power Systems Research (EPSR), 2021.

D. Chrysostomou, A. Dimitriou, N. Kokkinos, C. A. Charalambous "Short-Term Electromagnetic Interference on a Buried Gas Pipeline Caused by Critical Fault Events of a Wind Park: A Realistic Case Study", IEEE Transactions on Industry Applications, 2020.

JOURNAL SUBMISSIONS UNDER REVIEW

D. Chrysostomou, J. L. R. Torres and J. L. Cremer, "Machine Learning-based Method to Support TSO-DSO Adaptive Coordination with Active Power Management for Instability Prevention", Under Review in IEEE Transactions on Smart Grid (2nd Round).

D. Chrysostomou, J. L. R. Torres and J. L. Cremer, "Selection for Flexibility Areas using Probabilistic Machine Learning Under Measurement Uncertainty", Under Review.

CONFERENCE PUBLICATIONS

D. Chrysostomou, J.L.R. Torres, J.L. Cremer "Exploring Operational Flexibility of Active Distribution Networks with Low Observability," IEEE Powertech Belgrade, Serbia, 2023

TECHNICAL REPORTS

P. Aristidou, D.Chrysostomou, and C.A. Charalambous, "Assessment of the Loss-of-Mains/Anti-islanding protection for the Cyprus Distribution System". Adopted by the Distribution System Operator of Cyprus, 2019.

AWARDS

Leventis Foundation

Scholarship for the MSc of Robotics, Systems and Control.

2019 & 2020

Logicom Company

Scholarship for the MSc of Robotics, Systems and Control.

2018

Electrical and Computer Engineering Department, University of Cyprus Best Thesis of 2018 Award.

2018

Electrical and Computer Engineering Department, University of Cyprus Award for Excellent Academic Performance.

2018

ADDITIONAL PROJECTS

- Autonomous Mobility on Demand: Fleet Autopilot ETH Zurich.
 - Focused on Robot localization, movement planning, coordination, and precision.
- Creating a Computational Tool for Thermal Limits of Overhead and Underground Cables UCY.
- Creating a Computational Tool Estimating Grounding Electrode Dimensions and Resistance UCY.

MEMBERSHIPS

IEEE TU Delft PES Chapter - Secretary in 2024, 2025

IEEE TU Delft Student Branch - Member

IEEE Computer Society, Control Systems Society, and PES Society

- Graduate Student Member



