

Alejandro Almodóvar Espeso

PHD STUDENT

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EDUCATION

Universidad Politécnica de Madrid PhD. Communication Systems and Technologies Thesis keywords: Causal inference, PhFederated learning, Longitudinal data, Treatment effects, Hidden confounding, Structural causal models	Madrid, Spain Currently
Universidad Politécnica de Madrid M.S. Telecommunication Engineering	Madrid, Spain June 2022
Universidad Politécnica de Madrid B.S. Telecommunication Engineering	Madrid, Spain June 2020

SKILLS

Programming languages: Python (primary), Java, JavaScript/TypeScript, HTML/CSS, R, \LaTeX , MATLAB
Tools: Git/GitHub, VS Code, IntelliJ PyCharm, RStudio
Specialized knowledge: Machine learning, Bayesian inference, Probabilistic methods, Causal learning, Statistics.
Languages: Spanish (native), English (fluent)

PUBLICATIONS

- **Inverse Reinforcement Learning: a New Framework to Mitigate an Intelligent Backoff Attack.**
Parras, J., Almodóvar, A., Apellániz, P.A., Zazo, S. (2022)
IEEE Internet of Things Journal, vol 9, no. 24, pp.24790-24799.
 - Journal metrics (2021): IF: 10.238, Rank Q1 (94.15 in Telecommunications, 94.82 in Computer Science: Information Systems, 93.66 in Engineering: Electrical and Electronic)
- **Federated learning for causal inference using deep generative disentangled models.**
Almodóvar, A., Parras, J., Zazo, S. (2023)
Deep Generative Models for Health Workshop NeurIPS 2023. (Poster)

PROFESSIONAL EXPERIENCE

Teacher assistant <i>Universidad Politécnica de Madrid</i> <ul style="list-style-type: none"> • Courses: Digital Signal Processing Probability and Random Signals Advanced Data and Signal Processing • One supervised Master's Thesis in Knowledge Graphs 	Sept. 2023 – Present
PhD student grant (Programa Propio UPM) <i>Universidad Politécnica de Madrid</i>	Feb. 2023 – Present

PROJECTS

Genomed4all European Comission Federated learning platform for medical data processing	2022 – Present
MadridDataSpace4Pandemics Community of Madrid Causal inference for treatment effect estimation in COVID-19	Jan. 2022 – Dec. 2023
Precision Drug Repurposing for Europe and the World European Comission Knowledge graph for drug repurposing	Sept. 2022 – Present
Synthema European Comission Treatment effect prediction for survival analysis	Dec. 2022 – Present