Pablo Gómez-Abajo

Assistant Professor | PhD in Computer Science

Contact

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https://gomezabajo.github.io

https://github.com/gomezabajo

Profile

Assistant Professor in Computer Languages and Systems at the Universidad Autónoma de Madrid. Combines academic research with real-world software development experience. Specialized in software engineering, model-based testing, domain-specific languages, and human-computer interaction.

Areas of Expertise

- Software Engineering
- Software Testing & Mutation Testing
- Human-Computer Interaction
- Modeling & Domain-Specific Languages
- Adaptive and Intelligent Systems

Academic Appointments

Assistant Professor | Universidad Autónoma de Madrid (2019 – Present)

Courses taught include: Compilers, Operating Systems, Automata Theory, Software Analysis & Design, and Advanced Networks.

Research Associate | Universidad Autónoma de Madrid (2015 – Present)

Part of the MISO Group, focusing on DSLs and software testing frameworks.

Industry Experience

IT Manager | Ingeniería y Prevención de Riesgos S.L. (2008 – 2015)

Led the development of web and desktop applications using Microsoft .NET, MySQL, Oracle, PHP, and Java. Clients included Adif, Canal de Isabel II, and Correos y Telégrafos.

Education

PhD in Computer Science & Communications Engineering | UAM (2016–2020)

Thesis: A Domain-Specific Language for Model Mutation (Cum Laude)

M.Sc. in ICT Research & Innovation | UAM (2014–2016)

Thesis awarded special mention. GPA: 8.19/10

B.Sc. in Computer Science & Engineering | UAM (2000–2006)

GPA: 7.4/10

B.A. in Philosophy | UNED (In Progress)

74/240 ECTS completed. GPA: 8.0/10

Additional Studies (Ongoing)

- M.Sc. in Research in Artificial Intelligence – Universidad Internacional Menéndez Pelayo
- M.Sc. in Clinical Bioethics – Universidad Internacional Menéndez Pelayo
- Secondary School Teacher Training – Universidad Nacional de Educación a Distancia

Key Projects

- Wodel: Model mutation framework
- Wodel-Edu: Education-focused mutation exercise generation
- Wodel-Test: Framework for language-independent mutation testing
- Gotten: Domain-independent metamorphic testing for software models

Selected Publications

- Mutation Testing for Task-Oriented Chatbots, ACM EASE 2024 (Core A)
- Automated Engineering of Domain-Specific Metamorphic Testing Environments, IST 2023 (Q2)
- Wodel-Test: Language-Independent Mutation Testing, SoSyM 2021 (Q2)
- Tool for Domain-Independent Model Mutation, SCP 2018 (Q3)

Awards & Recognitions

- Best New Ideas Paper – SLE 2021
- Best Tool Demo Paper – MODELS 2021
- PhD Thesis Award – JISBD 2022

Technical Skills

- Languages: Java, C, C#, JavaScript, R
- Frameworks & Tools: Xtext, Xtend, Henshin, MOMoT, Botium, Rasa

Languages

- Spanish – Native (C2)
- English – Fluent (C2)
- Portuguese – Intermediate (B1)
- Basic Communication in French, German, Italian, Arabic