JUAN CARLOS ALONSO VALENZUELA

PhD Student

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PROFILE

24-year-old PhD Student in Software Engineering, with a master's degree in software engineering (CLOUD, Data, and IT Management) and a bachelor's degree in software engineering. I am currently working as a teaching assistant in the University of Seville. My current research interests focus on automated software engineering, software testing, natural language processing, and artificial intelligence.

RESEARCH EXPERIENCE

POSITIONS

- **Predoctoral researcher** .... 2022 -
  Applied Software Engineering (ISA) research group – Seville (Spain)
- **Teaching assistant** .... 2021 -
  University of Seville (Spain)
- **Research assistant** .... 2020 - 2021
  Applied Software Engineering (ISA) research group – Seville (Spain)

PUBLICATIONS

Journals

- Juan C. Alonso, Alberto Martin-Lopez, Sergio Segura, José María García, Antonio Ruiz-Cortés. **ARTE: Automated Generation of Realistic Test Inputs for Web APIs.** *IEEE Transactions on Software Engineering.* 2022.

Conferences and workshops

- Juan C. Alonso, Sergio Segura, Antonio Ruiz-Cortés. **AGORA: Automated Generation of Test Oracles for REST APIs (<u>Distinguished Artifact Award</u>).** *32nd ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA 2023).* Seattle. 2023.
- Juan C. Alonso. **Automated Generation of Test Oracles for RESTful APIs.** *30th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering, ACM Student Research Competition (ESEC/FSE 2022).* Singapore. 2022.
- Sergio Segura, Juan C. Alonso, Alberto Martin-Lopez, Amador Durán, Javier Troya, Antonio Ruiz-Cortés. **Automated Generation of Metamorphic Relations for Query-Based Systems.** *7th International Workshop on Metamorphic Testing (MET'22).* Pittsburgh, USA. 2022.
- Juan C. Alonso. **Automated generation of realistic test inputs for web APIs.** *29th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of*

Software Engineering, ACM Student Research Competition (ESEC/FSE 2021). Athens, Greece. 2021.

R&D PROJECTS

National projects:

- **LOTUS: digitaL transfOrmaTion of the pUblic administration driven by intelligent contractS.**
  Funding: Ministerio de Ciencia, Innovación y Universidades (Spanish Government).
  Duration: 2022 – 2024
- **BUBO: Improving the development, reliability and governance of digital services through bot-human collaboration.**
  Funding: Ministerio de Ciencia, Innovación y Universidades (Spanish Government).
  Duration: 2022 – 2025
- **HORATIO: Improvements in the reliability, customization and operating costs of software services regulated by user agreements.**
  Funding: Ministerio de Ciencia, Innovación y Universidades (Spanish Government).
  Duration: 2019 – 2021

Regional projects:

- **EKIPMENT-PLUS: Knowledge-based process performance improvement: A multidisciplinary empirical approach based on people, equipment, software, and data.**
  Funding: Junta de Andalucía (Consejería de Economía y Conocimiento) (Andalusian Government).
  Duration: 2020 – 2022
- **APOLO: Technologies for highly reliable service-oriented systems regulated by user contracts.**
  Funding: Junta de Andalucía (Programa operativo FEDER) (Andalusian Government).
  Duration: 2019 – 2021

ACKNOWLEDGMENTS AND AWARDS

- **Distinguished Artifact Award ISSTA 2023** (July 2023).
- **Second Place Winner in ACM SRC Grand Finals 2023** (May 2023).
- **Winner of the ACM Student Research Competition** at the European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022).
- **Mentee at IMFAHE** (www.imfahe.org), the International Mentoring Foundation for the Advancement of Higher Education.
- **Best Master Thesis of my promotion and best record of my year.** (July 2022).
- **Award for best Bachelor Thesis of my promotion.** (November 2021).

TEACHING EXPERIENCE

- **Architecture and Integration of Software Systems.** Software Engineering degree, 2nd year. University of Seville.
  - 2021-2023: Laboratory sessions (English and Spanish groups).

- **Data and Algorithm Analysis and Design.** Software Engineering degree, 2nd year. University of Seville.
  - 2021-2022: Laboratory sessions.
- **Intelligent Access to Information.** Software Engineering degree, 4th year. University of Seville.
  - 2021-2022: Laboratory sessions.
- **Operating Systems.** Software Engineering degree, 2nd year. University of Seville.
  - 2021-2022: Laboratory sessions.
- **Requirements Engineering:** Software Engineering degree, 3rd year. University of Seville.
  - 2022: Laboratory sessions.

EDUCATION

- **Master's degree in Software Engineering – CLOUD, Data and IT Management** 2021 - 2022
  Escuela Técnica Superior de Ingeniería Informática (University of Seville) – Seville (Spain)
  Average: 9.59 (over 10), Best record of my year. **Subjects with distinction: 5** (including thesis).
- **Bachelor's degree in Software Engineering** 2016 - 2021
  Escuela Técnica Superior de Ingeniería Informática (University of Seville) – Seville (Spain)
  University of Mannheim (Germany) – Erasmus stay (2019-2020)
  Average: 7.82 (over 10). **Subjects with distinction: 3** (including thesis)

LANGUAGES

- **Spanish.** Native proficiency.
- **English.** Bilingual proficiency. C2 level certified by Cambridge.
- **Japanese.** Intermediate working proficiency. B1 level certified by the Institute of Languages of the University of Seville.