

Alison Fernandez Blanco

PHD · COMPUTER SCIENCE

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Education

University of Chile

Santiago, Chile

PHD IN COMPUTER SCIENCE

2018-2023

- Thesis: “Empirical Foundation for Memory Usage Analysis Through Software Visualizations”
- Advisor: Dr. Alexandre Bergel, Dr. Juan Pablo Sandoval Alcocer
- CONICYT PhD Scholarship

Universidad Mayor de San Simón

Cochabamba, Bolivia

LICENCIATURA EN INGENIERIA INFORMÁTICA

2012-2017

- Undergrad research: “Metáfora visual para el análisis y la navegación en la evolución de datos del proceso de software”
- Advisor: Dr. Alexandre Bergel
- Ranking: 1(first) of 4.

Educational Experience

Part-time Professor

Santiago, Chile

PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE

2023-Today

- Course: Topics Avanzados en Ingeniería de Software. Semester: 2023-2
- Course: Testing. Semester: 2023-1
- Course: Ingeniería de Software. Semester: 2023-1, 2023-2

Coordinator Assistant

Santiago, Chile

PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE

2023-Today

- Course: Actividad de Graduación - Magister en Inteligencia Artificial.

Teaching Assistant

Santiago, Chile

UNIVERSITY OF CHILE

2020-2022

- Course: Minería de Datos. Semester: 2022-1
- Course: Introduccion a la Minería de Datos. Semester: 2020-1, 2020-2, 2021-1, 2021-2

Teaching Assistant

Cochabamba, Bolivia

UNIVERSIDAD MAYOR DE SAN SIMÓN

2016

- Course: Lógica. Semester: 2016-1, 2016-2

Professional Experience

RESEARCH & INDUSTRIAL EXPERIENCE

PhD Candidate, Computer Science

Santiago, Chile

UNIVERSITY OF CHILE

2018-2023

- Project: “Fine-Grained Memory Issues Characterization”
- Part of Intelligent Software Construction laboratory (ISCLab)
- Contact: Dr. Alexandre Bergel

Researcher & Software Developer

Cochabamba, Bolivia

SEMANTICS S.R.L.

2017-2018

- Semantics is a Smalltalk-based software development company that provides programming language support, libraries, and tools to improve daily software development activities.
- Our team continuously supports different open-source projects around the world. <http://semantics.bo/>
- The work developed at Semantics is open source and available at <https://github.com/OBJECTSEMANTICS/>
- Contact: Dr. Juan Pablo Sandoval Alcocer

Research

INTERNATIONAL JOURNAL PUBLICATIONS (WEB OF SCIENCE)

An Empirical Study Of Mobile Code Offloading In Unpredictable Environments. *Pablo Sanabria, Andres Neyem, Juan Pablo Sandoval Alcocer, Alison Fernandez Blanco.* IEEE Access, vol. 11, pp. 69263-69281, 2023. (URL)

Software Visualizations to Analyze Memory Consumption: A Literature Review. *Alison Fernandez Blanco, Alexandre Bergel, Juan Pablo Sandoval Alcocer.* ACM Computing Surveys (CSUR), 55(1), 1-34. 2022. (URL)

A domain-specific language to visualize software evolution. *Alison Fernandez, Alexandre Bergel.* Information and Software Technology, vol. 98, p. 118-130. 2018. (URL)

PUBLICATIONS IN INTERNATIONAL CONFERENCES: FULL RESEARCH PAPERS

A Manual Categorization Of New Quality Issues On Automatically-Generated Tests. *Geraldine Galindo Gutierrez, Maximiliano Narea Carvajal, Alison Fernandez Blanco, Nicolas Anquetil, Juan Pablo Sandoval Alcocer.* IEEE International Conference on Software Maintenance and Evolution ICSME 2023. (to appear)

Visualizing Memory Consumption with Vismep. *Alison Fernandez Blanco, Alexandre Bergel, Juan Pablo Sandoval Alcocer, Araceli Queirolo Córdoba.* Proceedings of 10th IEEE Working Conference on Software Visualization. VISSOFT 2022. (URL)

Effective Visualization of Object Allocation Sites. *Alison Fernandez Blanco, Juan Pablo Sandoval Alcocer, Alexandre Bergel.* IEEE International Conference on Software Visualization. 2018. (URL)

WORKSHOPS AND NIER PAPERS

DGT-AR: Visualizing Code Dependencies in AR. *Dussan Freire-Pozo, Kevin Cespedes-Arancibia, Leonel Merino, Alison Fernandez Blanco, Andres Neyem and Juan Pablo Sandoval Alcocer.* 11th IEEE Working Conference on Software Visualization. 2023. (to appear)

SmallEvoTest: Genetically Created Unit Tests in Pharo. *Alexandre Bergel, Geraldine Galindo Gutiérrez, Alison Fernandez Blanco and Juan-Pablo Sandoval Alcocer.* Proceedings of International Workshop on Smalltalk Technologies (IWST 2023).

Deviation testing: A test case generation technique for GraphQL APIs. *Daniela Meneses Vargas, Alison Fernandez Blanco, Andreina Cota Vidaurre, Juan Pablo Sandoval Alcocer, Milton Mamani Torres, Alexandre Bergel, Stephane Ducasse.* International Workshop on Smalltalk Technologies. 2018. (URL)

Analyzing Dynamic Information with Spy and Roassal: An Experience Reports. *Alison Fernandez, Diego Gabriel Nuñez Duran, Alejandro Infante, Alexandre Bergel.* 1st International Workshop on Software Analytics (collocated with SANER'15). (URL)

Honors & Awards

- 2023 **Doctoral Medal**, University of Chile
- 2022 **Distinguished Paper Award**, Lo Mejor de lo Nuestro 2022 (JCCC 2022), Chile
- 2019 **Beca de Doctorado para extranjeros**, CONICYT, Chile
- 2018 **Beca de Doctorado NIC-DCC**, University of Chile, Chile
- 2015 **Reconocimiento al rendimiento academico destacado**, Universidad Mayor de San Simón, Bolivia
- 2015 **Noveno Lugar - ACM-ICPC**, South America Regional, Bolivia
- 2014 **Distinguished project - Summer School**, Universidad Mayor de San Simón, Bolivia

Research Community Implications

- 2023 **Reviewer**, Empirical Software Engineering Journal - EMSE-D-23-00254
- 2023 **Program Committee Member**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2023 **Web Chair**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2022 **Program Committee Member**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2022 **Program Committee Member**, International Workshop on Visualization in Testing of Hardware, Software, and Manufacturing (TestVis collocated with IEEE VIS)
- 2022 **External Reviewer**, IEEE/ACM International Conference on Software Engineering (ICSE)
- 2022 **Web Chair**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2021 **Program Committee Member**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2021 **Web Chair**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2020 **Program Committee Member**, International Workshop on New Interfaces for Programming (NIP)
- 2020 **Artifact Evaluation Committee**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2020 **Web Chair**, IEEE Working Conference on Software Visualization (VISSOFT)
- 2019 **Web Chair**, IEEE Working Conference on Software Visualization (VISSOFT)

TALKS

- 2023 - *Pontificia Universidad Catolica de Chile, Chile*. Talk: Vismep: Visualizing Memory Behavior of Python ; Contact: Dr. Leonel Merino.
- 2017 - *Universidad Nacional de La Plata, Argentina*. Talk: Analyzing Software Evolution Through MultiPile Matrix; Contact: Dr. Leandro Caniglia.
- 2017 - *Universidad Mayor de San Simón, Bolivia*. Talk: Analyzing Software Evolution Through MultiPile Matrix; Contact: Marcelo Flores Soliz.

Mentoring

- 2021 **Araceli Nicole Queirolo Córdova**, Memoria para optar al título de Ingeniera Civil en Computación. (URL) [University of Chile](#)

Languages

Spanish (native), English (professional proficiency)

References

Dr. Alexandre Bergel

RelationalAI, Switzerland
Email: alexandre.bergel@me.com
Webpage: <http://www.bergel.eu>

Dr. Juan Pablo Sandoval Alcocer

Pontificia Universidad Católica de Chile, Chile
Email: juanpablo.sandoval@ing.puc.cl
Webpage: <https://jpsandoval.github.io/index.html>