



Paul Leger, Ph. D. in Computer Science & Software Engineer

Software Engineer & Associate Professor
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Personal

Name: Paul Leger
Hometown: Coquimbo, Chile
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Research:
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Education

Visiting Researcher, universities across the world:

- Centre for Development of Advanced Computing (C-DAC), India, 2024 (3 weeks).
- University of The Andes, Colombia, 2021 (3 weeks).
- Tokyo Institute of Technology, Japan, 2019 (6 months).
- University of Cauca, Colombia, 2018 (2 months).
- Shibaura Institute of Technology (x 2), Japan, 2013-2014 (4-2 months).
- École des mines de Nantes, France, 2010 (2 months).

Certifications:

- "Fundamentals of English Medium Instruction", University of Pennsylvania, 2023 (August).
- "Teaching University", Highest level, Catholic University of the North, 2024 (January).

Ph. D. in Computer Science, University of Chile, 2006 - 2012.

- Subject: Opening Up Trace-Based Mechanisms.
- Advisor: Eric Tanter (<http://pleiad.cl/etanter>).

Engineering degree in Computer Science, University of La Serena, 1999 - 2005 (July).

B.Sc. in Computing Science, University of La Serena, 1999 - 2005 (April).

Management Services

Director. Engineering School (<https://eic.ucn.cl>) at Universidad Católica del Norte (Chile). Management of a budget for a four-floor engineering school with 1,000+ students, guiding professors, and a teaching support unit, 2024 - 2026.

Director. Chilean Computer Science Society (SCCC), 2020 - 2022.

Subdirector. Engineering Systems Doctorate (<https://dsi-en.ucn.cl>) at Universidad Católica del Norte (Chile), 2023 - 2024.

Head of program study. Civil Engineering in Computer Science at Universidad Católica del Norte (Chile), over 400 students, 2021 - 2022.

Pragmatics Lab. Director of an international research laboratory (<http://pragmatics-lab.com>), where professors and students from Japan, Colombia, and Chile collaborate, 2019 - present.

Software Development Engineer

As I enjoy working on software engineering, I occasionally work as a freelancer doing software development and as a team manager in software projects:

Macrosoftware. Consulting software engineer, 2020 - present.

G-Tech. Project Manager, a startup mobile application, 2022.

Autopista Central. Consulting engineer, 2017.

Regional Observatory (working market). Software project manager, implementation of an information system that allows users to analyze working market in a region of Chile, 2016 - 2017.

Autopista Central. Consulting engineer, 2011.

Center for Advanced Research in Arid Zones (CEAZA). Research assistant, where I used MM5 (mesoscale model) to simulate mesoscale atmospheric, 2002 - 2004.

Software Development for Research

My software projects are more related to creating complex software artifacts than developing traditional industrial software (e.g., Inventory Management). Source: <http://pleger.cl/software>.

EMAjs: JavaScript library that implements an Expressive and Modular Activation mechanism for context-oriented programming. <https://github.com/pragmatics-laboratory/EMAjs>, 2022.

CommerceSimulator: Java software to simulate buyers in e-commerce like Amazon, AliExpress, and Wish. This simulation considers the endorsements theory. Finally, this software can be used to execute different kinds of experiments. <https://github.com/pleger/ABME-market>, 2021.

DeloreanJS: A back-in-time debugger for JavaScript. This software is strongly developed by Felipe Ruiz (felipe.ruiz@alumnos.ucn.cl) and Guillermo Victorero (guillermo.victorero@alumnos.ucn.cl). You can try it on <http://pleger.cl/sites/deloreanjs>. <https://github.com/pragmatics-laboratory/deloreanjs>, 2019.

AspectScript: An aspect-oriented extension of JavaScript for expressive AOP, which integrates several state-of-the-art features related to higher-order programming and expressive scoping of aspects. <https://pleiad.cl/aspectscript>, 2010.

Matcher Cell: A JavaScript library to flexibly match patterns. You can try it on <https://pragmatics-laboratory.github.io/matcher-cells-study-cases>. <https://github.com/pragmatics-laboratory/match-cell-base>, 2021.

RAI-JS: A JavaScript library for Context-Oriented Programming (COP), which supports reactive activation mechanisms. You can try it on <http://pleger.cl/sites/raijs>. <https://github.com/pleger/rai-js>, 2019.

Sync/CC (proof of concept): A library to address callback issues on JavaScript. You can try it on <https://pleger.cl/synccc>. <https://github.com/pragmatics-laboratory/synnccc>, 2019.

Academic Experience

Scientific Services

Funded Projects (*x* 4). Principal Researcher (ANID-2023), Principal Investigator (Chile), and Co-Researcher (Japanese government).

Organizer of International Events (*x* 4). JCC'20 (Chile), COP'20 (Germany), and MPSE'14/15 (USA).

Editor and Reviewer of JCR Journals (*x* 46). Editor (*x* 4) and Reviewer (*x* 42).

Chair of International Events (*x* 9). ICSME'23 (Colombia), LMN'22 (Chile), JCC'20 (Chile), MPSE'14/15 (USA), SAC-SE'17 (Morocco), and BIONETICS'15 (USA).

Program Committee Member (*x* 18). SAC-SE (various countries), SBLP (Brazil), COP (Germany), VISSOFT (Chile), and INFONOR (Chile).

Evaluator (*x* 13). Research Projects and (International) External Master Reviewers.

Lecturer

Postgraduate (*x* 7). Areas are Programming Languages, Software Engineering, and Management.

Undergraduate (*x* 46). Areas are Programming Languages, Software Engineering, and Management.

Thesis Advising (*x* 26). Postgraduate (*x* 2) and Undergraduate (*x* 24).

For more information about my teaching experience, please visit <http://pleger.cl/teaching>.

Publications

My research profile ID on Google Scholar: <https://scholar.google.cl/citations?user=CrqCdsgAAAAJ>

Indexed Journals. 34 publications (28 JCR-WoS, 2 SCOPUS, 1 ESCI, and 3 LatIndex).

Indexed Conferences. 16 publications (SCOPUS).

Indexed Workshops. 7 publications (SCOPUS).

For detailed information about my publications, please visit <http://pleger.cl/research>.

References

Hidehiko Masuhara. Ph. D. in Computer Science. Full Professor & Dean. Department of Mathematical and Computing Science. Tokyo Institute of Technology, Japan (masuhara@acm.org). Webpage: <https://prg.is.titech.ac.jp/people/masuhara>.

Éric Tanter. Ph. D. in Computer Science. Full Professor. Computer Science Department (DCC), University of Chile, Chile (etanter@dcc.uchile.cl). Webpage: <https://pleiad.cl/people/etanter>.

Alexandre Bergel. Ph. D. in Computer Science. Computer Scientist. Rational AI (<https://relational.ai>), Switzerland (alexandre.bergel@me.com). Webpage: <https://bergel.eu>.