# Paul Leger, Ph. D. in Computer Science

Software Engineer & Associate Professor

Civil Engineering School

Catholic University of the North

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Pragmatics lab: http://pragmaticslab.com (Director)
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### Personal

Name: Paul Leger Hometown: Coquimbo, Chile

Nationality: Chilean



#### Education

**Visiting Researcher**, universities across the world:

- 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).

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

- Subject: Opening Up Trace-Based Mechanisms.
- Advisor: Éric 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. Chilean Computer Science Society (SCCC), 2020 - 2022.

**Project Manager**. A freelance software development manager, mainly in agile methodologies, 2019 - present.

**Recruiting and developing team**. As director of the research laboratory, I am constantly looking for new good students to prepare them in different computer science projects. Likewise, I am often making new research groups of professors from different countries, 2018 - present.

Head of program study. Civil Engineering in Computer Science, over 400 students, 2021 - 2022.

Head of program study. Engineering in Information Technology, over 100 students, 2021 - 2022.

**Pragmatics Lab**. Director of an international research laboratory, 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 team leader in software projects:

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, two tasks: a) using MM5 (mesoscale model) to simulate mesoscale atmospheric circulation and b) applying artificial neural networks to classify rainfall scenarios (both tasks applied to a limited-area in Chile), 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**: A JavaScript library that implements an Expressive and Modular Activation mechanism for context-oriented programming. GitHub: https://github.com/pragmaticslaboratory/EMAjs, 2022.

**eCommerSimulator**: A 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. GitHub: https://github.com/pleger/ABME-market, 2021.

**Matcher Cell**: A JavaScript library to flexibly match patterns. You can try it on https://pragmaticslaboratory.github.io/matcher-cells-study-cases and its GitHub on https://github.com/pragmaticslaboratory/match-cell-base, 2021.

**DeloreanJs**: A back-in-time debugger for JavaScript. This software is strongly developed with Felipe Ruiz (felipe.ruiz@alumnos.ucn.cl). You can try it on http://pleger.cl/sites/deloreanjs and its GitHub on https://github.com/fruizrob/deloreanjs, 2019.

**SyncCC**: A library to address callback issues on JavaScript. You can try it on http://pleger.cl/synccc and its GitHub on https://github.com/pragmaticslaboratory/synnccc, 2019.

**ESA-JS**: An Expressive Stateful Aspect Language (ESA) for JavaScript. You can try it on http://pleiad.cl/esa, 2012.

**WeCa**: A practical library to address causality issues on the Web. You can try it on http://pleiad.cl/weca, 2012.

**AspectScript**: An aspect language for JavaScript, where poincuts, join points, and advices are first-class values in the language. You can try it on http://pleiad.cl/aspectscript, 2010.

# Academic Experience

Scientific Services

Funded Projects (x 2). Principal Investigator (Chile), 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 **34).** Editor (x **3)** and Reviewer (x **31)**.

**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* **15).** SAC-SE (various countries), SBLP (Brazil), COP (Germany), VISSOFT (Chile), and INFONOR (Chile).

**Evaluator** (x 8). Research Projects and (International) External Master Reviewers.

#### Lecturer

Postgraduate (x 6). Areas are Programming Languages, Software Engineering, and Management.

**Undegraduate** (x 41). 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. 29 publications (23 JCR-WoS, 2 SCOPUS, 1 ESCI, and 3 LatIndex).

Indexed Conferences. 12 publications (SCOPUS).

Indexed Workshops. 7 publications (SCOPUS).

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

#### Awards & Distinctions

**The Best of Ourselves**, two scientific articles have been selected on "The Best of Ourselves" on Chilean Computer Science Society (Chile), 2019 & 2022.

**Best working paper award**, AEMARK, Spain, 2015. http://www.aemarkcongresos.com/congreso2015/es/premios.

**Selected as the best professor for undergrad teaching**, Business School, Catholic University of the North, Chile, 2014 and 2017.

### 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.