# HEINICH PORRO

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## EDUCATION

**Universidad de Chile** — Santiago, Chile

- Bachelor of Engineering Science in Computing — *Mar. 2015 - Jan. 2020*
- Computing Engineering — *Mar 2017 - May. 2021*
- Master of Science in Computer Science — *Mar. 2020 - May. 2021*

Thesis Project: Delaunay Triangulations for Moving Points Fixed Radius near Neighbors

**Université de Limoges** — Limoges, France

- Ph.D. in Computer science — *September 2021 - Today*

Thesis Project: Dynamic Simulations based on 3D Delaunay Triangulations.

## WORK EXPERIENCE

**Adobe Inc.** — *Jun. 2023 - Aug. 2023*
*Research Intern (C++/Python)* — *Seattle, WA. USA.*

- Worked in the development of a new module for the internal code of Lagrange, the in-house geometry processing library.

**Geophysics Department, University of Chile** — *Jul. 2019 - Dec. 2019*
*Software Eng./Part time dev. (Javascript)* — *Santiago, Chile*

- Worked in a team that developed a web platform to visualize natural disasters. I was part of the design and implementation of a tool to improve decision making in the case of an earthquake.

**Synopsys Chile ltda.** — *Jan. 2019 - Feb. 2019*
*R&D Intern (C++/Python)* — *Santiago, Chile*

- Worked in CATS software, fixing coverity issues and improving a gdb tool used to debug geometric algorithms.

**Geomechanics laboratory, AMTC** — *Sep. 2018 - Dec. 2018*
*Research Intern (Python)* — *Santiago, Chile*

- AMTC is the advanced mining technology center dependent of the University of Chile.
- In charge of design and implementation of 3D mesh algorithms (mesh slicing variants) applied to sublevel stoping mining planning.

## RESEARCH

**Master Thesis:**

- Porro Sufan, H. S. (2021). Delaunay triangulations for moving points fixed radius near neighbors.

**Poster:**

- Porro, H., Crespin, B., Hitschfeld-Kahler, N., & Navarro, C. (2022). Fixed-radius near neighbors searching for 2D simulations on the GPU using Delaunay triangulations. In EUROGRAPHICS 2022 (EG 2022).

**Short paper:**

- Porro, H., Crespin, B., Hitschfeld, N., Navarro, C., & Carter, F. (2023, March). Maintaining 2D Delaunay triangulations on the GPU for proximity queries of moving points. In SIAM International Meshing Roundtable Workshop 2023 (SIAM IMR 2023).

**Full paper:**

- Crespin, B., Porro, H., Cerbelaud, M., Videcoq, A., & Gerhards, J. (2024). SOMA-BD: Brownian dynamics simulation for soft matter on GPU. Engineering with Computers, 1-14.

## DISTINCTIONS

Outstanding student years 2019 and 2020. Awarded by the faculty of Physical and Mathematical Sciences of the University of Chile.

## TEACHING ACTIVITIES

**Teching assistance at University of Chile:**

· Computer Graphics, Design and Analysis of Algorithms, GPU Computing, etc. *2017 - 2021*

**Teaching at University of Limoges as a PhD researcher (around 50 hours):**

· Unix system programming, Java programming, Concurrent programming, etc. *2022 - 2023*

**Teaching fellow (ATER) at university of Limoges (around 180 hours):**

· Unix system programming, android development, introduction to programming, etc. *2024 - 2025*

## SKILLS

**Languages**

· Spanish - Native
· English - Proficient
· French - Intermediate