

# Eduardo Novaes Hering

Experimental physicist.

## Personal details:

Citizenship: Brazilian and Swiss. Born in Brazil, Swiss ancestors.

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Email: [enhering@gmail.com](mailto:enhering@gmail.com)

Birthdate: March 15th, 1973.

## List of key competencies:

- Social: Team working, ability to work in an international environment, student tutoring.
- Scientific: experimental, high pressure and low temperature physics, dilution refrigerators, scientific instrumentation development, optics, lasers, lab safety etc.
- Programming languages: C++, C, Perl, SQL.
- Programming: simulations, data acquisition, data processing, automation, GPIB, data fitting.
- Operating systems: Linux (Debian, RedHat, Fedora, FreeBSD), MacOS.
- Experience as a sysadmin and with networking and security.
- Experience with embedded systems: AVR, including designing and building my own boards and systems.

## Relevant work experience:

- 2018: Postdoctoral fellow: Development of a system to detect and characterize biological samples' activity through dynamic speckle and laser interferometry.
- 2013-2014: Research on condensed matter physics, studying the  $RTm_2Al_{20}$  (R: Rare Earth, Tm: Transition metal) systems under very high pressures and low temperatures, using diamond anvil cells (DAC) for electrical resistivity and AC specific heat measurements.
- 2010-2012: Development of low temperature instruments and components to permit various scientific characterization techniques to reach temperatures below 1K.
- 2007-2009: Postdoctoral fellow: Development of a low temperature environment for the development of low temperature components.
- 2006-2007: Postdoctoral fellow: Development of a dilution refrigerator.

## Educational background:

### 1. Education:

- 2015-2016 Licentiate in Physics.
- 2001-2006 Doctorate in Physics, Pontifical Catholic University of Rio de Janeiro - PUC-Rio (<http://www.puc-rio.br>)
- 1998-1999 Master in Physics (MSc), PUC-Rio.
- 1992-1997 Bachelor in Physics, PUC-Rio.

### 2. Language skills:

- Brazilian Portuguese - native speaker.
- English, fluent.
- French, A1.

### 3. Academic history/production:

- 12 scholarships, from scientific initiations to postdocs. International experience in Sweden, France and Germany.
- 2 grants (startup and technological development).
- 6 research projects, including Masters and PhD.
- 4 scientific initiation advisory projects, 4 students.
- 3 high school scientific vocation projects, 7 students.
- 18+ articles in scientific journals.

- co author in 22+ presentations in congresses.
- 13+ works published in conference proceedings.
- 14 schools, congresses or workshops attended.
- participation in the organization of 3 international conferences.
- participation in 2+ *latu sensu* judging commission boards.

#### **4. Teaching experience:**

- Physics undergraduate courses: The Cold Side of Physics (on low temperature physics 2012), Experimental Physics Lab I and III (2001, 2003), Physics for Arts lab (1998).
- High school: PIUES - School, University and Society Integration Program (experimental physics lectures for school students visiting the university).
- JavaScript programming modules (2006-2012),
- Project Publishing and Management modules (2006-2012).