

# Patricio de la Cuadra

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## Education

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### STANFORD UNIVERSITY

- **PhD. in Computer Based Music Theory and Acoustics, PhD minor in Electrical Engineering**, 2005. Thesis title: "The sound of oscillating air jets: physics, modeling and simulation in flute-like instruments"
- **MSc. in Electrical Engineering**, 2000. Concentration in signal processing and systems.
- **MA. in Music, Science and Technology**, 2000. Concentration in sound synthesis and perception.

### CATHOLIC UNIVERSITY OF CHILE

- **Licentiate and Professional degree in Industrial-Electrical Engineering**, 1995. (6 yr. degree)
- **Licentiate in Music Performance**, specialized in Flute, 1997.(6 yr. degree)

### ECOLE NORMALE DE MUSIQUE DE PARIS

- **Diplôme Supérieur d'Exécution** in Flute, 2002

## Experience

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**TEACHING ASSISTANT**, Stanford University, 2004-2005. Musical Acoustics, Human Computer Interfaces, Foundations of Sound Recording Technology and Foundations of Computer-Generated Sound.

**IRCAM (INSTITUT DE RECHERCHE ET COORDINATION ACOUSTIQUE/MUSIQUE)**, Paris, France. Sept.2001-Sept.2003, Project Engineer: research on physical models of wind instruments; develop tools for room acoustic simulation; measure and data analysis of radiation pattern on musical instruments.

**INTERNATIONAL SCIENTIFIC CONFERENCES**, 2001-2005, attends, publishes and presents in several international conferences in acoustic including ICMC, Forumacusticum, ICA, ASA and ISMA in Canada, Italy, France, Hungary and Japan.

**XEROX-PARC (PALO ALTO RESEARCH CENTER)**, California, USA. Jun.2001-Sept.2001, exploring the use of audible sound for wireless device communications, by designing and implementing acoustic communication systems in which the messages are music and other pleasant sounds.

**PHILIPS SEMICONDUCTORS**, California, USA. Jun.2000-Sept.2000, assisted in development of MP3 decoder; developed support utilities for software testing and software process improvement; researched options for audio related algorithms.

**IBM CHILE**, Santiago, Chile. Aug.1997-Aug.1998, Project Engineer: evaluated the impact of

Y2K on the information and control systems of the major mining companies of Chile and proposed hardware and software solutions.

**ESTABLECIMIENTOS PROVIDENCIA**, Santiago, Chile. Aug.1996-Aug.1997, Project Engineer: analyzed and prepared a detailed evaluation of hardware and software solutions to run and manage a chain of retail outlets.

**CATHOLIC UNIVERSITY OF CHILE**, Santiago, Chile. May 1996-Aug.1996, Project Engineer: adapted a virtual sensor system for the Scant software platform for use in mining.

**MEMBER OF THE MUSICAL GROUP BARROCO ANDINO**, 1992-1998, playing various Chilean folk instruments. Extensive performance experience including Carnegie Hall '94, concert tours in Europe, Japan, Taiwan, and US. Recorded 3 professional CD's.

## Honors and Awards

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**BEST STUDENT PAPER AWARD**, in the annual meeting of the Acoustical Society of America, Vancouver, May 2005.

**FULBRIGHT GRANT**, Aug.1998-June 2000, to study engineering and music in the US.

**PRESIDENTE DE LA REPUBLICA SCHOLARSHIP** Aug.1998-June 2000, full tuition for graduate studies in US.

**DOUBLE MAJOR SCHOLARSHIP**, Catholic University of Chile, 1991-1994, full tuition for undergraduate studies.

**MAXIMUM SCORE IN THE PAA MATHEMATICS** (admission exam for Chilean universities).

## Skills

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**LANGUAGES.** Spanish mother's tongue; **French** spoken.

### COMPUTER SKILLS

- Operating systems: Linux, Windows y OSX.
- Developing tools: C, C++, qt, Matlab, L<sup>A</sup>T<sub>E</sub>X, Bash.
- Software: Office (Microsoft and open-office), Max/MSP, pd ...