

CARLOS MOCHON

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EDUCATION

- 1999–2005 **California Institute of Technology** Pasadena, CA
Ph.D. in Physics. Advisor: Dr. John Preskill. Thesis: *From non-abelian anyons to quantum computation to coin-flipping by telephone.*
- 1995–1999 **Massachusetts Institute of Technology** Cambridge, MA
B.S. in Physics with Electrical Engineering. GPA 4.9/5.0.

EMPLOYMENT

- 2005–present **Perimeter Institute for Theoretical Physics** Waterloo, Canada
Postdoctoral Fellow. Developed algorithms for a new kind of computer, known as a quantum computer, that exploits the power of quantum mechanics to achieve speedups that are not possible with classical algorithms. Additionally, devised cryptographic protocols based on quantum information with applications to secure computation.
- 2001–2004 **Caltech Particle Theory Group** Pasadena, CA
Computer system administrator for a fifty person group. Managed desktop computers running Linux and Windows and a server running Solaris. Also helped members of the group with technical questions.
- 1997–1999 **Xerox Palo Alto Research Center** Palo Alto, CA
(*summers*) Undergraduate Internship Program. Researched applications of analog markets to mechatronic system control, and design of gestural user interfaces for portable computers. Work involved microcontroller programming, integration of tilt and pressure sensors, and simulation using SPICE and matlab. Awarded patents 6,243,074, 6,243,075 and 6,630,922.
- 1996–1997 **MIT Media Laboratory** Cambridge, MA
Undergraduate Research Opportunities Program. Programmed in Lisp and assembly language (for 68K and PPC architectures) as part of a team developing an educational programming language called StarLogo.

SKILLS

- C, C++, Lisp, assembly language (x86, 68K, PPC), shell scripts.
- System administration for Linux, Windows and Solaris.
- Monte Carlo simulations for physics and finance.
- Fluent in English and Spanish.
- U.S. Citizen.