

Carlos Martínez

Education

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"A youth who had begun to read geometry with Euclid, when he had learnt the first proposition, inquired, What do I get by learning these things? So Euclid called a slave and said Give him threepence, since he must make a gain out of what he learns." -- Stobaeus, Extracts

Education

- Currently **PhD.(C) in Mathematics**, Wesleyan University, Department of Mathematics and Computer Science, Middletown, CT, USA.
- 1997 **MSc. in Mathematics**, Pontificia Universidad Católica de Chile, Department of Mathematics and Statistics, Santiago, Chile.
- 1994 **BSc. in Mathematics**, Pontificia Universidad Católica de Chile, Department of Mathematics and Statistics, Santiago, Chile.

PhD. Thesis

- Title *Higher Order Unification module Type Isomorphism*
- Supervisor Dr. Daniel J. Doughety
- Description We present some initial results concerning higher order unification and matching in the presence of type isomorphism. We introduce the notion of term isomorphism under which we aim to develop unification algorithms. It is not hard to show that this equality holds desirable properties such as the decidability of its validity problem. We establish a characterization theorem of term isomorphisms in terms of labeled tree isomorphisms; which we think will lead us to an efficient unification algorithm implementations.

MSc. Thesis

- Title *Algebraizability of Bi-modal Logics*
- Supervisors Dr. Renato Lewin
- Description The principal idea of this work is to examine bimodal logics from the point of view of the algebraizability of deductive systems theory developed by W.J.Blok and D. Pigozzi in their work "Algebrizable Logics". The algebraic counterpart of these logics is bimodal algebras; in this context we will discuss the instance of bi-topological spaces. Finally, we will give examples of bimodal logics, that is, deontic logics, temporal logics and logics of inaccessible worlds.

Awards and Honors

- Fellowship *Avel F. Backlin Fellowship: Fall '02 - Spring '03.* Awarded by Worcester Polytechnic Institute.
- Scholarship *Beca Presidente de la República: Spring '99 - Fall '01.* Awarded by Ministerio de Planificación y Desarrollo de Chile.
- Stipend *Graduate Student Stipend: Fall'04 - Fall'07.* Awarded by Departamento de Matemáticas y Estadísticas, Pontificia Universidad Católica de Chile.
- Scholarship *Beca Presidente de la República: Fall '91 - Spring '93.* Awarded by Ministerio de Planificación y Desarrollo de Chile.

Teaching Seminars

- January'09 Workshop "Comunidad de Aprendizaje: Un estilo efectivo de aprender" by PhD Ed. Maria Estela Rojas, at Facultad de Ciencias Físicas y Matemáticas, Universidad Central de Chile, Santiago, Chile
- January'09 Workshop "El profesor de la Universidad Central y los alumnos de Primer año: hacia un aprendizaje significativo" by Instituto para el Desarrollo Cognitivo and Facultad de Ciencias de la Educación at Universidad Central de Chile, Santiago, Chile

Academic Visit: Wesleyan University - Worcester Polytechnic Institute - Harvard University

- Fall'08 Academic visit gear to continue thesis work, residency in Cambridge, Massachusetts, USA. Attended Theoretical Computer Science Seminar at Harvard, MIT and WPI, as well as NELPS at Harvard.

Research Assistant

- Fall'02 - Spring'03 Department of Computer Science, Worcester Polytechnic Institute, Worcester MA, USA
- Description Through this academic visit attend to diverse graduate level computer sciences courses such as Operating Systems, Design of Programming Languages, Automata and Formal Languages, Coding Theory

Languages

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| Spanish | Fluent | <i>My native language.</i> |
| English | Intermediate | <i>Speaking, reading, and writing.</i> |
| German | Basic | <i>Speaking, reading, and writing.</i> |

Computer skills

Proof Assistants	Isabelle, AProVe	Languages	SML, Scheme, SQL, Prolog,
Typesetting	L ^A T _E X, T _E X, TikZ, Beamer	Packages	Maple, Maxima
Platforms	Linux, Windows	Databases	MySQL
Office	Word, Excel, Access	Tools	Gimp, VirtualBoX

Interests

Bicycling	It takes me almost anywhere.
Photography	Amateur and having no professional expectations.
Films	Twentieth's century "digital novels".
Yoga Iyengar	"Strong and steady inhalation, strong and steady exhalation".
Kun Fu Choy	"Green stripe on White Belt, so far".
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