

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, Departamento de Matemáticas y Estadísticas, Santiago, Región Metropolitana, Chile.
- 1994 **BSc. in Mathematics**, Pontificia Universidad Católica de Chile, Departamento de Matemáticas y Estadísticas, Santiago, Región Metropolitana, Chile.

PhD. Thesis

- Title *Higher Order Unification module Type Isomorphism*
- Supervisor Dr. Daniel J. Dougherty
- 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 "Algebraizable 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

- Award *Best Teaching by students evaluation Spring Semestre 2014.* Dirección de Docencia, Universidad De Los Lagos, Osorno, Chile.
- Award *Best Teaching by students evaluation Fall Semestre 2014.* Dirección de Docencia, Universidad De Los Lagos, Osorno, Chile.
- Fellowship *Avel F. Backlin Fellowship: Fall '02 - Spring '03.* Awarded by Worcester Polytechnic Institute.
- Scholarship *Beca Presidente de la República: Agosto 1999 - Diciembre 2001.* Awarded by Ministerio de Planificación y Desarrollo de Chile.
- Scholarship *Graduate Student Stipend: Marzo 1995 - Diciembre 1996.* Awarded by Departamento de Matemáticas y Estadísticas, Pontificia Universidad Católica de Chile.
- Scholarship *Beca Presidente de la República: Marzo 1991 - Diciembre 1993.* Awarded by Ministerio de Planificación y Desarrollo de Chile.

Teaching Seminars

- Septiembre 2015 **Taller "Aprendizaje más Servicio (A+S)"** , Unidad de Desarrollo Docente, Dirección de Docencia, Universidad De Los Lagos, Osorno, Chile.
- Noviembre 2012 **Workshop "Metodología para la Elaboración de Proyectos de Investigación Científica y Tecnológica" (64 hrs)**, Dirección de Investigación, Universidad De Los Lagos, Osorno, Chile.
- Noviembre 2011 **Workshop "Renovación Didáctica para la Formación de Competencias de Pensamiento Matemático"**, by PhD Ed. Marcela Ferrari Escolá, Dirección de Docencia, Universidad De Los Lagos, Osorno, Chile.
- Noviembre 2010 **Primer Encuentro Interdisciplinario de Investigación en Educación**, Centro de Estudios de Políticas y Prácticas en Educación, Pontificia Universidad Católica de Chile, Hotel Crown Plaza, Santiago, Chile.
- Septiembre 2010 **Seminario Internacional sobre Textos Escolares de Matemáticas, Física y Química**, Centro de Modelamiento Matemático, Universidad de Chile, Hotel Galerias, Santiago, Chile.
- Enero 2009 **Workshop "Comunidad de Aprendizaje: Un estilo efectivo de aprender"**, by PhD Ed. Maria Estela Rojas, Facultad de Ciencias Físicas y Matemáticas, Universidad Central de Chile, Santiago, Chile.
- Enero 2009 **Workshop "El profesor de la Universidad Central y los alumnos de Primer año: hacia un aprendizaje significativo"**, Instituto para el Desarrollo Cognitivo , Facultad de Ciencias de la Educación, Universidad Central de Chile, Santiago, Chile.

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

- Agosto - Wesleyan University, Worcester Polytechnic Institute, Harvard University: Academic visit,
Diciembre - residency in Cambridge, Massachusetts, USA. Attended Theoretical Computer Science
2008 Seminar at Harvard, MIT and WPI, as well as NELPS at Harvard.

Research Assistant

- Agosto 2002 - Department of Computer Science, Worcester Polytechnic Institute, Worcester MA, USA
Mayo 2003

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

Others

2014 **Diploma**, *Formación y Gestión Sindical*, Universidad De Los Lagos, Departamento de Ciencias Sociales, Osorno, Región De Los Lagos, Chile.

Languages

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, Coq	Languages	SML, Scheme, SQL, Prolog,
Typesetting	\LaTeX , \TeX , TikZ, Beamer	Packages	Maple, Maxima
Platforms	Linux, Windows	Databases	MySQL
Office	Word, Excel, Access	Tools	Gimp, VirtualBoX