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	<i>Nationality:</i>	German
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Professional situation

Assistant professor, College of Business Administration of the University of Talca

Field of research

Decision making in dynamic systems, modeling and learning for strategy, system dynamics

Degrees

"Diplom-Volkswirt" (Degree in Economics), Freiburg (Germany), 1990

PhD in "Sciences de Gestion" (Management science), Montpellier II (France), 2002.

PUBLICATIONS

Review articles

Mental Models of Dynamic Systems: Taking Stock and looking ahead, with Stefan Groesser, *System Dynamics Review* **28**(1): 46-68

A Comprehensive Method for Comparing Mental Models of Dynamic Systems, with Stefan Groesser, *European Journal of Operational Research* **210**(1): 57-67, April 2011

Causal loop diagrams as means to improve the understanding of dynamic problems: a critical analysis, *Systems Research and Behavioral Science* **27**(6): 653–666 (December 2010)

Learning from rediscovering system dynamics models, *Systèmes d'Information et Management* **14**(4)-2009, p. 87-105

“Itinerarios flexibles de exploración de modelos en base de bucles de Retroalimentación - el caso de Macrolab”, *Estudios Pedagógicos* **36**(1): 211-234 (2010)

“El trasfondo dinámico del salario ético en Chile – una exploración experimental”, with Patricio Madariaga, *Revista Cuadernos de Economía* Número 49, 2008, p. 183-206

“Para un pensamiento causal dinámico: hacia una perspectiva educativa”, with Patricio Madariaga, *Estudios Pedagógicos* **23**(1), p. 129-149 (2007)

“Factores que inciden en el financiamiento de los estudios Universitarios en Chile”, with R. Schmal, R. Ruiz and S. Donoso, *Sociologías* **9**, N° 17, 2006, p. 316-339

Detecting and monitoring change in models, *System Dynamics Review* 22(1):73-88, 2006

“Proposición de un modelo conceptual para la gestión de la docencia universitaria de pregrado basada en competencias”, with A. Ruiz-Tagle and R. Schmal, *Revista de Gestión de Tecnología y Sistemas de Información*, Volume 2, Número 3, Sept. - December, 2005

“Financiamiento de los estudios universitarios: un desafío estratégico de sustentabilidad”, with Rodolfo Schmal, Reinaldo Ruiz and Sebastian Donoso, *Panorama Socioeconómico* N^o 29, October 2004, p4-11

“Aplicaciones de la cibernética en la detección temprana de problemas de enseñanza en el sistema educativo chileno”, with Patricio Madariaga, *Revista Electrónica de Investigación Educativa*, México, Vol. 4, No. 2, 2002 (<http://redie.ens.uabc.mx>).

“Hacia el Mejoramiento Continuo en la Educación”, with Patricio Madariaga, *Perfiles Educativos* (México), vol. XXIII, núm. 94, 2002

Books

Observer, Modéliser, Construire et Agir comme un Système Autonome, Éditions universitaires européennes, 2011 (ISBN 978-613-1-58584-5)

Actitudes frente a la inversión y potencial de crecimiento, in *Anales del 3er Congreso de la Sociedad de Investigadores en Turismo de Chile*, JorgNegrete,, Víctor Constanzo, Sergio Erazo y Rodrigo Figueroa (ed.), Sociedad de Investigadores en Turismo de Chile, ISBN 978-956-332-684-0, Chile, Valparaíso, 2009, p. 95-108

“*Indagación de situaciones dinámicas mediante la dinámica de sistemas*”, Editorial Universidad de Talca, 2008

“Calidad en la construcción de aprendizajes en el ámbito universitario – una propuesta de acción”, en “*Nuevas políticas de la educación superior*”, junto con Patricio Madariaga, La Coruña (España), Netbiblio, 2002, p.465 - 483

Thesis

"Observer, Modéliser, Consturire et Agir comme un Système Autonome - une Méthodologie pour l'Apprentissage dans les Organisations" [Observing, Modeling, Constructing and Acting as an Autonomous System: a Mathodology for Learnng in Organizations], University of Montpellier II, France, November 2002

Conference proceedings

Learning to Think in Circles: Improving Mental Models of a Dynamic System, 30th International System Dynamics Conference 2012, St. Gallen, Switzerland (with Stefan Groesser)

Modeling as Autonomous System: Varela Meets Darwin, 30th International System Dynamics Conference 2012, St. Gallen, Switzerland (with Camilo Olaya)

The use of qualitative modeling to derive qualitative policy implications from structural aspects of a model – a practical case, 29th International Conference of the System Dynamics Society, Washington, DC, EE.UU., July 2011

Mental Models of Dynamical Systems: Taking Stock and Looking Ahead, with Stefan Groesser; Proceedings of the 28th International Conference of the System Dynamics Society, Seoul, South Korea, July 2010.

Automating the comparison of mental models of dynamical systems with Stefan Groesser; Proceedings of the 28th International Conference of the System Dynamics Society, Seoul, South Korea, July 2010

What is learned in system dynamics education: a competency-based representation based upon Bloom's taxonomy. Proceedings of the 28th International Conference of the System Dynamics Society, Seoul, South Korea, July 2010

"Redescubrimiento guiado de sistemas complejos mediante simuladores de dinámica de sistemas", with Patricio Madariaga, Proceedings of the ENEFA 2009, Antofagasta, Nov. 2009

"Comparación de escuelas de pensamiento económico con diagramas de bucle causal", Proceedings of the Séptimo Congreso Latinoamericano de Dinámica de Sistemas, Santa Marta, Colombia, Nov. 2009

What's in a mental model of a dynamic system? On the conceptual structure and approaches to model comparison, with Stephan Groesser. Proceedings of the 27th International Conference of the System Dynamics Society, Albuquerque, USA., July 2009

Towards the use of model structure analysis for designing flexible learning itineraries, Proceedings of the 27th International Conference of the System Dynamics Society, Albuquerque, USA., July 2009

"¿Cuánto se aprende al explorar un modelo de simulación? Hacia el concepto del redescubrimiento guiado", together with Patricio Madariaga, Martín Kunc and Juan Pablo Torres; proceedings of the 6th Annual meeting of the Latinamerican Chapter of the System Dynamics Society, Santiago de Chile, October 2008

"Hacia el uso de los bucles de retroalimentación en el diseño instruccional – el caso de MacroLab"; together with Juan Quiroz and Carlos Aravena; proceedings of the 6th Annual meeting of the Latinamerican Chapter of the System Dynamics Society, Santiago de Chile, October 2008

How much can be learned by exploring an existing model? The concept of guided rediscovery, Proceedings of the 26th International Conference of the System Dynamics Society, Athens, Greece., July 2008

"Explorando el trasfondo dinámico del salario ético en Chile – un enfoque experimental", Actas del 5to Congreso Latinoamericano de Dinámica de Sistemas, Buenos Aires, Noviembre 2007

Causality and diagrams for system dynamics, Proceedings of the 25th International Conference of the System Dynamics Society, Boston, USA., July 2007

Educational quality and equality – why are they so hard to reconcile?, Proceedings of the 25th International Conference of the System Dynamics Society, Boston, USA., July 2007

Modifying the Beer Game to make its dynamic structure more salient, Proceedings of the 24th International Conference of the System Dynamics Society, Nijmegen, Netherlands, July 2006

LaTina – An online system for teaching and learning stock-and-flow thinking skills, Proceedings of the 24th International Conference of the System Dynamics Society, Nijmegen, Netherlands, July 2006

"Bases para Diseñar un Modelo de Financiamiento de los Estudios Superiores en Chile", with Reinaldo Ruiz, Rodolfo Schmal y Sebastian Donoso, Actas del Tercer Congreso Latinoamericano de Dinámica de Sistemas, Cartagena de Indias (Colombia), November 2005

"Reconocer y estimar flujos y niveles: primeros resultados de un estudio empírico", Actas del Tercer Congreso Latinoamericano de Dinámica de Sistemas, Cartagena de Indias (Colombia), November 2005

Are you experienced? A model for the learning of systems thinking skills, Proceedings of the 23rd International Conference of the System Dynamics Society, Boston, July 2005

"¿Qué es un modelo de dinámica de sistemas?", Actas del Segundo Congreso Latinoamericano de Dinámica de Sistemas, Talca (Chile), 2004

Do models evolve?, Proceedings of the 22nd International Conference of the System Dynamics Society, Oxford (UK), July 2004

Towards the generation of a web-based information system on school quality in Chile's educational system, junto con Rodolfo Schmal y Sebastian Donoso, Proceedings of "Building society through e-commerce - COLLECTER-LatAm", Santiago, October 2003, p. 365

Use and abuse of information technology by university students - some surprising facts, with Patricio Madariaga, Proceedings of "Building society through e-commerce - COLLECTER-LatAm", Santiago, octubre 2003, p. 335

¿Puede un modelo de dinámica de sistemas capturar el aprendizaje en doble bucle?, Proceedings del 1er Congreso Latinoamericano de Dinámica de Sistemas, Monterrey, México, 2003

A Method for Managing Instruction, with Patricio Madariaga, Proceedings of the 6th World Multiconference on Systemics, Cybernetics and Informatics, Orlando, July 2002

“Hacia el Mejoramiento Continuo de la Capacitación en el Proyecto ENLACES”, with Patricio Madariaga, Taller Internacional de Software Educativo, Chile, 2001

A Method for Managing Organizational Learning, Proceedings of the 5th World Multiconference on Systemics, Cybernetics and Informatics, vol. II, p. 215-220, Orlando, July 2001

Managing Improvement amongst Autonomous Actors with OMCA - the case of the Chilean Educational Reform, Proceedings of the 17th International Conference of the System Dynamics Society, New Zealand, 1999

Facilitating Students' Perception of Systemic Concepts through 'Systemic Exploratories', Proceedings of the 17th International Conference of the System Dynamics Society, New Zealand, 1999

OTHER RELEVANT ACTIVITIES

2005 Editor-in-chief of the “Revista de Dinámica de Sistemas” (ISSN: 0718-1884), the spanish language on-line review on system dynamics.

2006-2009 president of the Latinamerician Chapter of the System Dynamics Society

2004 and 2008: organizer of the “Congreso Latinoamericano de Dinámica de Sistemas” (the latinamerician system dynamics conference).

Currently: President of the Economics Chapter of the System Dynamics Society

Currently: Vice President Chapters in the Policy Council of the System Dynamics Society

Reviewer for the *Systems Research and Behavioral Science*, *System Dynamics Review* and the *International System Dynamics Conference*

Languages

German	Mother tongue
French	Fluent
English	Fluent
Spanish	Fluent