

Terán Oswaldo R.

PERSONAL INFORMATION

Full name: Oswaldo Ramón Terán Villegas

Address: Casa 34, Calle San José, Urb. San Francisco, Parroquia Milla, Mérida, Venezuela, 5101.

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EDUCATION

Universidad de Los Andes.
Facultad de Ciencias Económicas y Sociales
(Economics School)

Instituto de Estadística Aplicada y Computación.
(Applied Statistics Institute). Venezuela

Degree: MSc. Applied Statistics, 1995.
GPA: 18.58 over 20 pts.

Thesis: Interpretive Study of a Neighbourhood Association
Tutor: Alejandro Ochoa

Universidad de Los Andes.
Facultad de Ingeniería.
(Engineering School). Venezuela

Degree: Systems Engineering, 1992.
GPA: 17.4 over 20 pts.

CUM LAUDE

Thesis: Simulation of Structural Change and Scenario Analysis
Tutor: Prof. Carlos. Domingo.

Manchester Metropolitan University
Centre for Policy Modelling
(Business School)

Degree: Ph.D. in Computational Modelling
Tutor: Bruce Edmonds

Thesis: 'Emergent Tendencies in Multi-Agent-based Simulations using Constraint-based Methods to Effect Practical Proofs over Finite Subsets of Simulation Outcomes' (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=292408)
United Kingdom

PROFESSIONAL EXPERIENCE

Titular Professor. Operations Research Department. Universidad de Los Andes. Mérida. Venezuela. 1992 to Present.
Teach Numerical Analysis, Simulation, Organisational Theory, Organisational Cybernetics, Situational Planning. Research in Social Simulation, Structural Simulation, Scenario Analysis, Situational Planning, Model Viable Systems, Organisational Theories, Software Development Methodologies, Soft systems theory.

Visiting Professor University Autonomous of Madrid (September - December 2004)

Undergraduate Teaching Assistant. Computer Science Department. Universidad de Los Andes. Mérida. Venezuela. 1989-1990.
Assist students at the Digital Programming Laboratory.

Researcher at the Centre for Policy Modelling, Machester, UK (1998-2001)

Executive Director and Planning Manager at FUNDACITE-Mérida (2003-2006)

Director of CENDITEL (2006-2010)

RESEARCH EXPERIENCE

Associate Member of CESIMO (Center for Simulation and Modeling). Engineering School. Universidad de Los Andes. 1992 to Present.
Social Simulation, Structural Simulation and Scenario Analysis.

Associate Member of CEMISID (Centre for Distributed Systems and Microelectronics). 2007-present

Associated Researcher about free technologies and free knowledge at CENDITEL and FUNDACITE in a diversity of projects (e.g., software development, planning, community work), technologic prospective (projects for PDVSA)

PUBLICATIONS

Journals and proceedings (see, for example: <http://cesimo.ing.ula.ve/simsocia/index.php/Main/Publicaciones>)

Camacho Julia, Sebastián Medina y Oswaldo Terán (2010), "Simulación Multiagente del tráfico de autos en una intersección", submitted to the journal *Revista Ciencia e Ingeniería* de la Universidad de Los Andes (2010), Mérida, Venezuela.

Terán Oswaldo, Norelkis Quintero, Magdiel Ablan y Johanna Alvarez (2010), "Simulación Social Multiagente: Caso Reserva Forestal de Caparo", *Interciencia*, Caracas, Venezuela.

Briceño Rosana y Oswaldo Terán (2009), "Aplicación del Modelo de Sistema Viable a la Fundación Centro Nacional de Tecnología Libres (CENDITEL): Diseño de indicadores y de un Sistema de Información", submitted to *Revista de Ciencias Sociales* de la Universidad del Zulia, Maracaibo, Venezuela.

- Terán Oswaldo, Flor Narciso, Johanna Alvarez, Jose Aguilar, Addison Ríos, Leandro Leon, Domingo Hernández, Francklin Rivas, Nelson Pérez, Jaime González.** “Un Marco Metodológico para el desarrollo de aplicaciones para automatización industrial”, *Revista de la Facultad de Ingeniería, Universidad Central de Venezuela*, Vol. 24, Number 1, 2009.
- Aguilar Jose, Terán Oswaldo, Addison Ríos, Leandro Leon, Domingo Hernández, Francklin Rivas, Nelson Pérez, Jaime González.** “Marco Metodológico para Prospectiva Tecnológica”, *Revista de Ingeniería de la Universidad del Zulia*, 2008.
- Niriaska Perozo, Jose Aguilar, Oswaldo Terán,** “Proposal for a Multiagent Architecture for Self-Organizing Systems (MA-SOS)”, *Intelligence and Security Informatics, Lecture Notes in Computer Science*, Springer, Vol 5075, pp. 434-439, 2008 (<http://www.springerlink.com/content/p011458076t4/?sortorder=asc&v=condensed&o=40>).
- Terán Oswaldo, Johanna Alvarez, Magdiel Ablan y Manuel Jaimes,** “Characterising Emergence of Landowners in a Forest Reserve”, *The Journal of Artificial Societies and Social Simulation (JASSS)*, Vol 10, Número 3 6, Surrey, Reino Unido, 2007 (<http://jasss.soc.surrey.ac.uk/JASSS.html>).
- Jose Aguilar, Oswaldo Terán, Johanna Alvarez, Blanca Abraham,** “Fábrica de Software Libre: Sirviendo al Bienestar Colectivo”, *Proceedings del X Workshop Iberoamericano de Ingeniería de Requisitos y Ambientes de Software*, Margarita Island, Venezuela, pp. 524-531, 2007.
- Aguilar Jose, Terán Oswaldo y Alejandra Blanco,** “Sistema Regional de Innovación como Mecanismo de Gestión en Ciencia y Tecnología. Caso de Estudio: Estado Mérida”, *Revista de Sociología de la Universidad del Zulia*, Vol 12, Num 3, September-December, pp. 439-453, 2006.
- Terán Oswaldo, Juan de Lara, José Lisandro Aguilar, Manuel Alfonseca, Ana Muñoz,** “Simulating Structural Change in Adaptive Organisations”, *Systems and Cybernetics*, Vol 37, num 7, October-November, 2006 .
- Bruce Edmonds, Oswaldo Terán y Grary Polhill,** “To the Outer Limits and Beyond –characterising the envelope of social simulation trajectories”, *Proceedings of the The First World Congress on Social Simulation WCSS*, Kyoto, 21-25 Agosto, 2006.
- Alvarez Johanna, Blanca Abraham, Jose Aguilar y Oswaldo Terán,** “Gestión de proyectos de software para instituciones públicas”, *Gerencia Tecnológica Informática (GTI)*, Vol. 5, Number 13, pp. 67-72, Colombia, 2007 (<http://www.iticol.org/>).
- Terán Oswaldo, Juan de Lara, Manuel Alfonseca,** “Towards an Agent-Based Model of Adaptive Organizations”, *Proceeding of the WSEAS Conference on i-SMO*, pp. 1667-1672, Vol. 2, Num. 10, Corfu Island, Greece, August, 2005.
- Blanca Abraham, Jose Aguilar, Ingrid Vivas, Leandro Leon, Oswaldo Terán,** “Visión de Desarrollo Endógeno basado en Software Libre”, Capitulo del libro arbitrado: *Libro de Actas del I Congreso de Tecnología del Software Libre celebrado en la Coruña*, España, 7-8 de julio, 2005, pp. 150-156, Edited at Universidad de La Coruña.
- Terán Oswaldo, Johanna Alvarez, Manuel Jaimes y Magdiel Ablan (2005),** “Land Occupation and Land Use Change in a Forest Reserve: A MABS Approach”, *Proceedings of the CABM-HEMA-SMAGET Joint International Conference on Multi-Agent Modelling for Environment Management*, 21-25 de Marzo, Bourg Saint Maurice-Les Arcs, France (cormas.cirad.fr/forum/cormas/old2004_2006/att-0350/07-cabm_hema_smaget_2005.pdf).
- Blanca Abraham, Jose Aguilar, Ingrid Vivas, Leandro Leon, Oswaldo Terán,** “Visión de Desarrollo Endógeno basado en Software Libre”, *Proceeding del I Congreso de Tecnología del Software Libre*, La Coruña, Spain, 7-8 de julio, 2005.
- Blanca Abraham, Jose Aguilar, Ingrid Vivas, Leandro Leon, Oswaldo Terán,** “Visión of Endogenous Development Based on Free Software (In the context of 9th World Conference on Systemics, Cybernetics and Informatics: WMSCI 2005)”, *Proceedings of the Internacional Symposium on Free/Open Source Software, Technologies and Content*, Orlando, USA, July 10-13, 2005.
- Jose Aguilar, Oswaldo Terán, Alejandra Blanco,** Sistema regional de innovación como mecanismo de gestión en ciencia y tecnología, *Question*, year 3, number 26, pp. 24-25, 2004.
- Oswaldo Terán,** “Understanding MABS and Social Simulation: Switching Between Languages in a Hierarchy of Levels”, *The Journal of Artificial Societies and Social Simulation (JASSS)*, Surrey, Reino Unido, Octubre, Volume 7, Issue 4, 2004.
- Oswaldo Terán Y Bruce Edmonds,** “Constraint Model-Based Exploration of Simulation Trajectories in a MABS Model”, *Proceedings of the WLP 18th Workshop on (Constraint) Logic*, Postdam, Germany, 2004.
- Terán Oswaldo and Jose Aguilar (2004),** “A Framework for Social Simulation Modelling: a Hierarchy of Levels of Language”, *Proceedings of the International Conference on Cybernetics and Information Technologies, Systems and Applications (CITSA 2004)*, pp. 213-218, Orlando, FL., July, 21-25, 2004.
- Aguilar, Jose, Terán Oswaldo e Ingrid Vivas,** "Un Modelo de Desarrollo Tecnológico para Venezuela", *Question*, pp 6-7, December, 2003.
- Terán Oswaldo and Bruce Edmonds (2002),** “Computational Complexity of a Constraint Model-based Proof of the Envelope of Tendencies in a MAS-based Simulation Model”, *Proceedings of the Second International Workshop on Complexity Deduction (CiAD)* (in conjunction with CADE-18 and FloC 2002), 25-26 July, Copenhagen, Denmark.
- Terán Oswaldo,** *Emergent Tendencies in Multi-Agent Based Simulations Using Constraint-Based Methods to Effect Practical Proofs Over Finite Subsets of Simulation Outcomes*, Doctoral Thesis, Centre for Policy Modelling, Manchester Metropolitan University, 2001.
- Terán Oswaldo,** “How Nature Works: The Science of Self-Organised Criticality” (Review Essay), *Journal of Artificial Societies and Social Simulation (JASSS)*, Online Journal at: <http://jasss.soc.surrey.ac.uk/4/4/contents.html>, 2001. Review Essay of Per Bak’s Book, *How Nature Works: The Science of Self-Organised Criticality*, New York, NY: Copernicus Press, 1996.
- Terán Oswaldo, Edmonds Bruce and Steve Wallis** "Mapping the Envelope of Social Simulation Trajectories", *Lecture Notes in Artificial Intelligence: MABS*, Volumen 1979, pp. 229-243, Springer, Germany, 2000.

Terán Oswaldo, B. Edmonds and S. Wallis, "Determining the Envelope of Emergent Agent Behaviour via Architectural Transformation", *Lecture Notes in Artificial Intelligence: ATAL-2000*, Vol. 1986, pp. 122-135, Springer, Germany, 2000.

Terán Oswaldo, Bruce Edmonds and Steve Wallis, "Enveloping Tendencies in Fragments of a Simulation Theory", *Research in Management and Systems-Working Paper Series*, First Four Business School Working Papers (ISSN 1471-857X), Manchester Metropolitan University, Manchester, December, 2000 (<http://www.man-bus.mmu.ac.uk/wps/fullpapers.htm>), 1-21.

Terán Oswaldo, Bruce Edmonds and Steve Wallis, "Constraint Exploration and Envelope of Simulation Trajectories", *Proceedings of the First Workshop on Rule-Based Constraint Reasoning and Programming* at the First International Conference on Computational Logic (CL2000), July 24-28, 2000, Imperial College, London, UK (página del workshop: <http://www.pst.informatik.uni-muenchen.de/personen/fruehwir/cl2000r.html>); este trabajo puede ser obtenido también desde: <http://arXiv.org/abs/cs/0007001>)

Domingo, C., T. Jiménez, V. Ramírez, M. Sananes, O. Terán, G. Tonella, "Simulation of Structural Change", *Proceedings of the 8th European Simulation Symposium (ESS-98)*, Simulation in Industry, Italy, 1998.

Terán, Oswaldo and Domingo Carlos, "Simulación Estructural y Análisis de Escenarios", *Economía*, pp. 191-203, Universidad de Los Andes, 13, Mérida, Venezuela, 1996 (<http://iies.faces.ula.ve/Revista/revista.htm>).

Domingo Carlos, Tonella Giorgio and Terán Oswaldo (1996), "Generating Scenarios by Structural Simulation", in *AI, Simulation and Planning High Autonomy Systems*, The Univ. of Arizona, pp 331-336.

Terán, Oswaldo and Domingo Carlos (1996), "Simulación Estructural y Análisis de Escenarios", *Economía*, University of Los Andes, 13.

Workshops

Jose Aguilar, Oswaldo Terán, Johanna Alvarez, Blanca Abraham, "Fábrica de Software Libre: Sirviendo al Bienestar Colectivo", X Workshop Iberoamericano de Ingeniería de Requisitos y Ambientes de Software, Margarita Island, Venezuela, pp. 524-531, 2007.

Bruce Edmonds, Oswaldo Terán y Gary Polhill, "To the Outer Limits and Beyond –characterising the envelope of social simulation trajectories", *WCSS The First World Congress on Social Simulation*, Kyoto, Japan, 21-25 August, 2006.

Blanca Abraham, Jose Aguilar, Ingrid Vivas, Leandro Leon, Oswaldo Terán, "Visión of Endogenous Development Based on Free Software (In the context of 9th World Conference on Systemics, Cybernetics and Informatics: WMSCI 2005)", *Internacional Symposium on Free/Open Source Software, Technologies and Content*, Orlando, USA, July 10-13, 2005.

Blanca Abraham, Jose Aguilar, Ingrid Vivas, Leandro Leon, Oswaldo Terán, "Visión de Desarrollo Endógeno basado en Software Libre", I Congreso de Tecnología del Software Libre, La Coruña, Spain, 7-8 de July, 2005.

Terán Oswaldo, Juan de Lara, Manuel Alfonseca, "Towards an Agent-Based Model of Adaptive Organizations", *WSEAS Conference on i-SMO*, Corfu Island, Greece, August, 2005.

Terán Oswaldo, Johanna Alvarez, Manuel Jaimes y Magdiel Ablan (2005), "Land Occupation and Land Use Change in a Forest Reserve: A MABS Approach", *CABM-HEMA-SMAGET Joint International Conference on Multi-Agent Modelling for Environment Management*, Bourg Saint Maurice-Les Arcs, France, 21-25 de March.

Oswaldo Terán Y Bruce Edmonds, "Constraint Model-Based Exploration of Simulation Trajectories in a MABS Model", *Proceedings of the WLP 18th Workshop on (Constraint) Logic*, Postdam, Germany, 2004.

Terán Oswaldo and Jose Aguilar (2004), "A Framework for Social Simulation Modelling: a Hierarchy of Levels of Language", *International Conference on Cybernetics and Information Technologies, Systems and Applications (CITSA 2004)*, Orlando, FL, July, 21-25, 2004.

Terán Oswaldo (2003), "A Framework for Social Simulation Modelling: a Hierarchy of Contextual Levels", *NAACSOS Conference 2003*, June 22-25, 2003, Omni William Penn, Pittsburgh, PA.

Terán Oswaldo and Bruce Edmonds (2002), "Computational Complexity of a Constraint Model-based Proof of the Envelope of Tendencies in a MAS-based Simulation Model", *Second International Workshop on Complexity Deduction (CiAD) in conjunction with CADE-18 and FloC 2002*, 25-26 July, Copenhagen, Denmark.

Domingo Carlos, Tonella Giorgio and Terán Oswaldo (1996), "Generating Scenarios by Structural Simulation", in *AI, Simulation and Planning High Autonomy Systems*, The Univ. of Arizona, pp 331-336.

Domingo Carlos, T. Jiménez, V. Ramírez, M. Sananes, O. Terán, G. Tonella (1996), "Simulation of Structural Change", in *A. Bruzzone and E. Kerckhoffs (editors), SCS publs*, pp 112-117.

Terán Oswaldo, Bruce Edmonds and Steve Wallis, "Constraint Exploration and Envelope of Simulation Trajectories", *First Workshop on Rule-Based Constraint Reasoning and Programming* at the First International Conference on Computational Logic (CL2000), July 24-28, 2000, Imperial College, London, UK (<http://www.pst.informatik.uni-muenchen.de/personen/fruehwir/cl2000r.html>); <http://arXiv.org/abs/cs/0007001>)

Terán Oswaldo, Johanna Alvarez, Manuel Jaimes y Magdiel Ablan (2005), "Land Occupation and Land Use Change in a Forest Reserve: A MABS Approach", *CABM-HEMA-SMAGET Joint International Conference on Multi-Agent Modelling for Environment Management*, Bourg Saint Maurice-Les Arcs, France, 21-25 de March.

Terán Oswaldo y Bruce Edmonds (2004), "Constraint Model-based Exploration of Simulation Trajectories in a MABS Model", *18 Workshop on (Constraint) Logic Programming*, Postdam, Germany, Marzo, 4-6, 2004. y I^{er} Congreso Iberoamericano de Estudiantes de Ingeniería Eléctrica, Mérida, 2004

BOOKS

Johanna Alvarez, Oswaldo Terán, Blanca Abraham and Jose Aguilar, “An Incremental Functionality-Oriented Free Software Development Methodology”, capítulo publicado en el libro: **Hanna Oktaba y Mario Piattini** (Eds.), *Software Process Improvement for Small and Medium Enterprises: Techniques and Case Studies*, Editorial Idea Group Inc , USA, 2008.

Aguilar Jose y Oswaldo Terán, “CENDITEL: Centro para el fomento del Conocimiento Libre”, capítulo publicado en la colección *Reflexiones desde CENDITEL*, Vol. 1, February, 2008 (<http://www.cenditel.gob.ve/BibliotecaVirtual>).

Terán Oswaldo, “Conocimiento como bien cultural: caso Sistema Regional de Ciencia, Tecnología e Innovación de Mérida”, capítulo publicado en la colección *Reflexiones desde CENDITEL*, Vol. 2, March, 2008 (<http://www.cenditel.gob.ve/BibliotecaVirtual>).

Johanna Alvarez, Jose Aguilar, Oswaldo Terán, *Metodologías para Desarrollo de Software Libre*, Libro colección *Experiencias desde CENDITEL*, Vol. 1, April, 2008 (<http://www.cenditel.gob.ve/BibliotecaVirtual>).

Aguilar Jose, Terán Oswaldo, y William Morantes, *Prospectiva Tecnológica*, FUNDACITE-MERIDA, 2006

Oswaldo Terán, Johanna Alvarez, Manuel Jaimes, Leiner Montilla, *Simulación Social Multi-Agente*, Monografía utilizada en el curso Estudio de Organizaciones del Postgrado de Modelado y Simulación del Centro de Simulación y Modelos de la ULA, 2006.

Terán Oswaldo, *Modelando Organizaciones: De las Teorías Clásicas a los Modelos Computacionales*, Consejo de Publicaciones de la Universidad de Los Andes, 2005.

Terán Oswaldo, *Modelado de Organizaciones*, Publicaciones de la Facultad de Ingeniería, 2003 (<http://cesimo.ing.ula.ve/~oteran/pmwiki>)

PROJECTS

CompetiSoft, (Models of capacities and processes for software development for IberoAmerica) Modelos de Capacidades y Procesos para Desarrollo de software en Iberoamérica
Responsible researcher: Mario Piattini (España), Hanna Oktaba (México)
Supported by: CYTED (Ciencia y Tecnología para el Desarrollo)

SCADA support (Asesoría en el área de metodología de diseño y desarrollo de software para el SCADA nacional)
Responsible researcher: Oswaldo Terán
Supported by: FUNDACITE-Mérida, PDVSA

Seguimiento y soporte en el desarrollo de medio de gestión de servicios de la arquitectura de aplicaciones sobre plataforma Net-Das 2.0
(SCADA related work)
Responsible researcher: Oswaldo Terán
Supported by: FUNDACITE-Mérida, PDVSA

Diseño instruccional de los talleres de formación en la plataforma TIC de PDVSA
(SCADA related work)
Responsible researcher: Franklin Rivas Echeverría
Supported by: PDVSA, UAPIT

Evaluación de Tecnologías y Metodologías a ser implantadas en el desarrollo de los diferentes componentes del SCADA Nacional
(Evaluation of Technologies and methodologies for development of a Nacional SCADA)
Responsible researcher: Oswaldo Terán
Supported by: PUNDACITE-Mérida, -PDVSA

Desarrollo de la Ingeniería Conceptual de Software para la definición de una Arquitectura Sistémica que permita implementar las funcionalidades y tecnologías identificadas en las mesas corporativas de Arquitectura y de Aplicaciones sobre Plataforma Net-DAS 2.0
(SCADA related work)
Responsible researcher: Jose Aguilar
Supported by: FUNDACITE-Mérida, PDVSA

Conceptualización de la Arquitectura de Automatización de PDVSA Petróleo
(Conceptualisation of the automation architecture of PDVSA)
Responsible researcher: Jose Aguilar
Supported by: PDVSA; FUNDACITE-MÉRIDA

Información e Inteligencia Organizacional **(Information and Intelligence in Organisations)**
Responsible researcher Manuel Alfonseca (UAM), Jose Aguilar (ULA)
Supported by: Grupo Santander (BBVA)

Reforma Curricular de la Escuela de Ingeniería de Sistemas **(Re-design of the Curriculum of the Systems Engineering School)**

Conceptualisation of CENDITEL (<http://www.cenditel.gob.ve>)

HONORS AND AWARDS

Scholarship for PhD studies at the CPM, Manchester Metropolitan University, UK. 1998-2001.
Level II Member of PPI (System for promoting researchers), CONICIT, Venezuela. 1997-Present
CUM LAUDE mention (Bachelor in Systems Engineering). 1992.
“Luis María Rivas Dávila” Award Best Student at the Systems Engineering School in 1991.
Superior Student Award, Lagoven S. A. (filial of the Venezuelan Oil Company) 1989 to 1992.
Scholarship, University of Los Andes. 1986 to 1989.

SKILLS

Languages: Spanish and English.

PROFESSIONAL OR COMMUNITY ORGANIZATIONS

Colegio de Ingenieros de Venezuela (Venezuelan Association of Engineers).
Asociación de Profesores Universitarios de Venezuela (Venezuelan Association of Lecturers)
ESSA (European Social Simulation Association)
Ibero-American Social Simulation Association