

CARLOS OTÁROLA-ZÚÑIGA

Current address: Costa Rica Institute of Technology. Dept. of Electromechanical Engineering.
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EDUCATION:

MASTERS DEGREE IN MODERN MANUFACTURING SYSTEMS (MEng) September, 2013
COSTA RICA INSTITUTE OF TECHNOLOGY.
Cartago, Costa Rica.

BACHELOR DEGREE IN MECHANICAL ENGINEERING August, 2006
UNIVERSITY OF COSTA RICA.
San José, Costa Rica.

DIPLOMA IN MACHINING PROCESSES IN CONVENTIONAL AND CNC LATHE AND MILL.
September, 2010
Costa Rica National Learning Institute (INA).

CURRENT POSITION:

COSTA RICA INSTITUTE OF TECHNOLOGY. June, 2011 – Current
Department of Electromechanical Engineering.
Cartago, Costa Rica.
Professor.

EXPERIENCE:

Area Coordinator at Manufacturing Processes Subject. February 2013 - Current
Professor courses taught: Manufacturing Processes, Vector Mechanics: Statics, Vector
Mechanics: Dynamics, Technical Drawing, Industrial Drawing.
June, 2011 – Current
Design of Mechanical Components for Gas turbine applications at Agilis C.R. 2007-2011

PUBLICATIONS:

- J Mora, V I Vargas, C Otarola, C Piedra, W Jimenez, L Esquivel, R Esquivel, K Sanchez, J Gonzalez, J Asenjo, L Fonseca: *Engineering of the Stellarator of Costa Rica: SCR-1*. Journal of Physics Conference Series 03/2015; 591(1):012017., DOI:10.1088/1742-6596/591/1/012017
- V I Vargas, J Mora, J Asenjo, E Zamora, C Otárola, L Barillas, J Carvajal-Godínez, J González-Gómez, C Soto-Soto, C Piedras: *Constructing a small modular stellarator in Latin America*. Journal of Physics Conference Series 03/2015; 591(1):012016., DOI:10.1088/1742-6596/591/1/012016
- V I Vargas, R Solano-Piedra, C Otarola, L Aguirre-Rojas, K Valladares-Alfaro, F Sáenz-Castro, J Mora, J Asenjo, F Coto-Vílchez, J Sánchez-Castro, D López-Rodríguez, L Barillas: *SCR-2: A Quasi-Toroidally Symmetric Stellarator for Latin America*. 16th Latin American Workshop on Plasma Physics (LAWPP 2017); 09/2017
- V I Vargas, J Mora, C Otarola, R Solano-Piedra, J Asenjo, F Coto-Vílchez, J Sanchez-Castro, L A Araya-Solano, A M Rojas-Loaiza, J M Arias-Brenes, J F Rojas, J I Monge, N Piedra-Quesada, D López-Rodríguez, M A Rojas-Quesada, L Barillas: *Engineering overview of the Fusion Research in Costa Rica: SCR-1 Stellarator and Spherical Tokamak MEDUSA-CR*. 27th IEEE Symposium on Fusion Engineering (SOFE), Shanghai, China; 06/2017
- V.I. Vargas, J. Asenjo, L. Barillas, F. Coto-Vílchez, R. Esquivel-S, R. Solano-Piedra, C. Otárola, E. Villalobos, O. Gatica-Valle, J. Castro, A. Carmona-Cruz, D. Morales-Hidalgo, G. Madrigal-Boza, M.G. Campos, P.J. Mena, J. Fernández -Vega, J. Mora: *First Results of the Stellarator of Costa Rica 1 (SCR-1)*. 26th IAEA Fusion Energy Conference (FEC IAEA), Kyoto, Japan.; 10/2016

- V.I. Vargas, J. Mora, J. Asenjo, L. Barillas, A. Mora, E. Villalobos, C. Otárola: *Manufacturing of a small scale Stellarator in Costa Rica*. 29th Symposium on Fusion Technology (SOFT 2016), Prague, Czech Republic.; 09/2016
- V.I. Vargas, J. Mora, C. Otárola, E. Zamora, J. Asenjo, A. Mora, E. Villalobos: *Engineering, fabrication, tests and status of the Costa Rican SCR-1 stellarator*. 22nd IAEA Technical Meeting (TM) on Research Using Small Fusion Devices (22nd TM RUSFD), Prague, Czech Republic; 10/2015
- V.I. Vargas, J. Mora, C. Otárola, E. Zamora, J. Asenjo, A. Mora, E. Villalobos: *Construction, Commissioning and first Results of the Costa Rican Stellarator SCR-1*. 20th International Stellarator-Heliotron Workshop (ISHW), Greifswald, Germany; 10/2015
- V.I. Vargas, J. Mora, C. Otárola, E. Zamora, J. Asenjo, A. Mora, E. Villalobos: *Progress on small modular stellarator SCR-1*. 42nd European Physical Society Conference on Plasma Physics (EPS 2015), Lisbon, Portugal; 06/2015
- V I Vargas, J Mora, C Otárola, E Zamora, J Asenjo, A Mora, E Villalobos: *Implementation of Stellarator of Costa Rica 1 (SCR-1)*. 26th IEEE Symposium on Fusion Engineering (SOFE), Austin, Texas. USA; 05/2015, DOI:10.1109/SOFE.2015.7482321
- V I Vargas, J Mora, C Otárola, J Asenjo, E Zamora, D Pérez, J González-Gómez, C Piedras, Scr-1 Team: *Constructing a Small Modular Stellarator in Latin America*. 56th Annual Meeting of the APS Division of Plasma Physics, New Orleans, Louisiana. USA; 10/2014
- V I Vargas, J Mora, C Otárola, J Asenjo, E Zamora, C Piedra: *Constructing a Small Modular Stellarator in Latin America*. 17th International Congress on Plasma Physics (ICPP 2014), Lisbon, Portugal; 09/2014
- J Mora, V I Vargas, C Otarola, C Piedra, W Jimenez, L Esquivel, R Esquivel, K Sanchez, J Gonzalez, J Asenjo, L Fonseca: *Engineering of the Stellarator of Costa Rica: SCR-1*. 15th Latin American Workshop on Plasma Physics (LAWPP 2014), San José, Costa Rica; 02/2014
- V I Vargas, J Mora, J Asenjo, E Zamora, C Otárola, L Barillas, J Carvajal-Godínez, J González-Gómez, C Soto-Soto, C Piedras: *Constructing a small modular stellarator in Latin America*. 15th Latin American Workshop on Plasma Physics (LAWPP 2014), San José, Costa Rica; 01/2014
- V.I. Vargas, J. Mora, J. Asenjo, E. Zamora, C. Otarola, J. Carvajal-Godínez, J. Gonzalez-Gomez, C. Soto-Soto, C. Piedras, L. Barillas, C. Ribeiro: *Engineering Issues to the Stellarator of Costa Rica 1 (SCR-1)*. 2013 IEEE 25th Symposium on Fusion Engineering (SOFE), San Francisco, California, USA; 01/2013, DOI:10.1109/SOFE.2013.6635443

LANGUAGES:

Spanish as mother tongue, fluent English, basic Italian, basic German.

OTHER SKILLS:

Advanced knowledge in mechanical design software such as Unigraphics NX4, Inventor 2013, AutoCad, PTC Creo.
 Intermediate arc welding skills for metallic structures. Colegio Universitario de Cartago.
 Intermediate knowledge in Minitab 16. (Basic knowledge in Design of Experiments using Minitab).
 Basic knowledge on programming languages used on websites, basic programming skills.
 Basic knowledge on finite analysis software such as ANSYS 10, ANSYS Workbench 10.
 Basic knowledge in CAM software such as EdgeCam.

MEMBERSHIPS:

IEEE Nuclear and Plasma Sciences Society (NPSS)
 Costa Rican Association of Engineers and Architects (CFIA).