# Dr. Rodrigo López Farías (Updated: 23/Feb/2016)

Personal

Information Birthday: 8/Jul/1984 e-mail: rodrigo.lopez@alumni.imtlucca.it

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Zip Code: 58070 Skype Id: rdglpz

Morelia, Mexico

Programming

SKILLS Matlab, Mathematica, Java, C++,R, SQL. PHP, HTML.

Academic Degree

#### 0.1. Studies

PhD in Computer Science and Engineering (with European Doctorate mention). Lucca, Toscana, Italy. (February 2012 - January 2016)

#### IMT Institute of Advanced Studies Lucca.

Thesis: Time Series Forecasting Based on Classification of Dynamic Patterns.

- Advisors: Dr. Alberto Bemporad, Dr. Pantelis Sopasakis.
- Study field: Time series analysis.

MSc in Electrical Engineering (Option: Computational Systems). Morelia, Michoacan Mexico. (March 2008 - August 2010)

### Universidad Michoacana de San Nicolas de Hidalgo.

 $The sis: Bifurcation\ Diagrams\ for\ Discontinuous\ or\ Nondifferentiable\ Equations.$ 

- $\bullet\,$  Advisors: Dr. Juan Jose Flores Romero, Dr. Claudio Fuerte Esquivel.
- Related research topics: Evolutionary computing, nonlinear dynamical systems, stability analysis and optimization.

**Engineer in Computational Systems**. - Morelia, Michoacan Mexico.(August 2002 - December 2007)

#### Instituto Tecnologico de Morelia.

• Thesis Project: Implementation and performance analysis of "Linux Terminal Server Project" for educational purposes.

## ACADEMIC EXPERIENCE

## 0.2. Courses Taught

Instituto Tecnológico de Morelia. Morelia, Mexico.

Teaching

## August 2011 - January 2012

Professor of: Structured and Object Oriented Computer programming (In Electronic and Industrial Engineering), Research Methodology (In Computational Systems Engineering).

January 2011 - July 2011

Professor of: Database Fundamentals (Computational Systems Engineering), Structures and organization of data. (Technology Information Engineering) and Evaluation of software projects.

#### August 2010 - December 2010

Professor of: Operative systems, selected topics of programming and research fundamentals.

Universidad de Morelia. Morelia, Mexico.

*Teaching* 

August 2009 - December 2009

• Web programming with PHP

#### Professional Experience

## 0.3. Participation in Research Projects

State Center for Information and Communications Technologies (CETIC). Morelia, Mexico.

Resident in physical infrastructure

March 2007 - June 2007

• Performance analysis of Linux Terminal Server Project

Instituto Tecnologico de Morelia. Morelia, Mexico.

Social Service Project

February 2007

• Develop of a web catalog for Social Service.

IMPULSA May 2005

• Program encourages young entrepreneurs IMPULSA.

#### **PUBLICATIONS**

## 0.4. Peer Reviewed Conference Articles

- Rodrigo López Farías, Juan J. Flores and Vicenc Puig Qualitative and Quantitative Multi-Model Forecasting with Nonlinear Noise Filter Applied to Water Demand IEEE Autumn Meeting on Power, Electronics and Computing Ixtapa México, November 2015.
- Juan J. Flores, Jose Ortiz Bejar, Jose Rafael Cedeno, Carlos Lara-Alvarez and Rodrigo López Farías FNN a Fuzzy Version of the Nearest Neighbor Time Series Forecasting Technique IEEE Autumn Meeting on Power, Electronics and Computing Ixtapa México, November 2015.
- Rodrigo Lópea Farías, Vicenc Puig A Multiple-Model Predictor Approach Based on an On-Line Mode Recognition with Application to Water Demand Forecasting International work-conference on Time Series 1 Granada España, July 2015.
- Rodrigo. López, V. Puig, H. Rodriguez An implementation of a multi-model predictor based on the qualitative and quantitative decomposition of the time-series International work-conference on Time Series 1 Granada España, July 2015.
- Dr., Juan Flores, Rodrigo López, Julio Barrera. Optimization with gravitational Interactions ROPEC XIII: Autumn Meeting of Electic power systems, electronic and computation (Reunión de Otoño de Potencia, Electróinca y Computación) Morelia México, Noviembre 2011.

- Juan Flores, Rodrigo Lopez, Julio Barrera. Gravitational Interactions Optimization. In Learning and Intelligent OptimizatioN (LION 5) Roma, Italy January 2010.
- Juan J. Flores, Rodrigo Lopez and Julio Barrera. Particle swarm optimization with gravitational interactions for multimodal and unimodal problems. In *Proceedings of the 9th Mexican International Conference on Artificial Intelligence (MICAI 2010)*, pages 361–370. Springer-Verlag. Pachuca, México. November 2010.

#### Conferences

- Invited to the 10 Congreso Estatal de Ciencia, Tecnología e Innovación, en la Mesa 2.-Ciencias de la Ingeniería y Tecnología, modalidad
- Activities of X Anniversary of the Instituto Tecnológico Superior de Ciudad Hidalgo 'Evolutionary computing applied to dynamical systems'. (Morelia, México. October 2010).
- Week of Research Projects FIE of the UMSNH 'Gravitational Interactions Optimization' (Morelia, México. June 2010 ).
- Week of Research Projects FIE of the UMSNH 'Bifurcations Diagrams using Artificial Intelligence Tools' (Morelia, México. June 2009).

# 0.5. Courses, Workshops or Seminars Taken

- "5th HYCON2 (Taming Heterogeneity and Complexity) PhD School on Control of Networked and Large-Scale Systems and the EFFINET PhD School on Control of Drinking Water Networks (Lucca Italy, 1 to 5 of July 2013)"
- Java workshop in the 2nd Week of Computation and Systems. Morelia, Mexico (2006).
- Analysis and Object Oriented Design using UML (Morelia Mexico, From 8 to 12 of August 2011)
- Week of Systems and computation in the Instituto Tecnológico de Morelia. *Morelia*, *México* (2006).
- Week of Systems and computation in the Instituto Tecnológico de Morelia. Morelia, México (2005).