

PERSONAL  
INFORMATION

Birthday: 8 / Jul / 1984  
Address: Aramén # 313  
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Morelia, Mexico

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INTERESTS &  
SKILLS**Programming Languages**

MATLAB, MATHEMATICA, R, Java, C/C++, PHP-HTML-MySQL, Python, LISP.

**Research**

Machine learning, data mining, dimensionality reduction, time series, nonlinear dynamical systems, global optimization, evolutionary computing.

**Languages**

English: 550 ITP TOEFL points. Italian: B1 Common CEFRL Level.

ACADEMIC  
DEGREE**Ph.D in Computer Science and Engineering.** (W. European Doctorate mention).

IMT School of Advanced Studies Lucca. Lucca, Italy. (*Feb-2012 Jan-2016*).

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

Advisors: Dr. Alberto Bemporad. Dr. Pantelis Sopasakis.

Field of study: Time series analysis.

**MSc in Electrical Engineering (Branch: Computational Systems).**

Univesidad Michoacana de San Nicolas de Hidalgo. Morelia, Mexico. (*Mar-2008 Aug-2010*).

Thesis: Bifurcation Diagrams for Discontinuous or Non-differentiable Equations.

Advisors: Dr. Juan Jose Flores Romero, Dr. Claudio Fuerte E.

Field of study: Evolutionary computing, nonlinear dynamical systems, stability analysis and optimization.

**B.Eng. in Computer Systems.**

Instituto Tecnológico de Morelia. Morelia, México. (*2002 2007*).

Thesis: Implementation and performance analysis of “**Linux Terminal Server Project**” for educational purposes.

Field of Study: Applications of distributed operative systems.

ACADEMIC  
EXPERIENCE**Instituto Tecnológico de Morelia.** Morelia, Mexico.**Teaching**

- Structured programming and object oriented programming (Electronic and Industrial Engineering), Research Methodology (Computational Systems Engineering). (*Aug-2011 Jan-2012*).
- Database Fundamentals (Computational Systems Engineering), Structures and organization of data. (Technology Information Engineering) and Evaluation of software projects. (*Jan-2011 Jul-2011*).
- Operative systems, selected topics in programming and research fundamentals. (*Aug-2010 Dec-2010*).

**Universidad de Morelia.** Morelia, Mexico.**Teaching**

- Web programming with PHP. (*Aug-2009 Dec-2009*).

PROFESSIONAL  
EXPERIENCE

**State Center for Information and Communications Technologies (CETIC).** (*Mar-2007 Jun-2007*). Morelia, Mexico.

Resident in physical infrastructure department.

Project: Performance analysis of **Linux Terminal Server Project** applied to basic education.

**Instituto Tecnológico de Morelia.** Morelia, Mexico. (Feb-2007)  
 Social Service Project: Develop of a PHP Web catalog for Social Service.

## IMPULSA

Participation in the young entrepreneurs program: IMPULSA.

## PUBLICATIONS Journal Articles in JCR

### Accepted

- *Hector Rodriguez Rangel, Vicenç Puig, Rodrigo López Farías, Juan J. Flores* . Short-Term Demand Forecast using Bank of Neural Network Models Trained using Genetic Algorithms for the Optimal Management of Drinking Water Networks. *Journal of Engineering Applications of Artificial Intelligence*.(2016)

### Refereed Conference Papers

#### Accepted

- *Juan J. Flores, Felix Calderon Solorio, Jose Rafael Cedeño Gonzalez, Jose Ortiz Bejar and Rodrigo Lopez Farias*. Comparison of Time Series Forecasting Techniques with respect to Tolerance to Noise *IEEE Autumn Meeting on Power, Electronics and Computing Ixtapa México, November 2016*
- *Hector Rodriguez-Rangel, Vicenç Puig, Juan J. Flores and , Rodrigo López Farías*. Flow meter Data Validation and Reconstruction using Neural Networks: Application to the Barcelona Water Network **3rd International Conference on Control and Fault-Tolerant Systems, Barcelona, Spain. 2016.**
- *Hector Rodriguez Rangel, Vicenç Puig, Juan J. Flores and , Rodrigo López Farías*. Flow meter Data Validation and Reconstruction using Neural Networks: Application to the Barcelona Water Network **2016 European Control Conference, Aalborg, Denmark. June 2016.**
- *Rodrigo López Farías, Juan J. Flores and Vicenç Puig*. Qualitative and Quantitative Multi-Model Forecasting with Nonlinear Noise Filter Applied to Water Demand *IEEE Autumn Meeting on Power, Electronics and Computing*. DOI: 10.1109/ROPEC.2015.7395122. **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 Neighbour Time Series Forecasting Technique *IEEE Autumn Meeting on Power, Electronics and Computing Ixtapa México, November 2015* .
- *Rodrigo López Farías, Vicenç 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 Spain, July 2015.*
- *Rodrigo. López, Vicenç Puig, Hector 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 Spain, July 2015.*
- *Dr, Juan Flores, Rodrigo López, Julio Barrera*. Optimization with gravitational Interactions *ROPEC XIII: Autumn Meeting of Electric power systems, electronic and computation ( Reunión de Otoño de Potencia, Electrónica y Computación) Morelia México, November 2011.*
- *Juan Flores, Rodrigo Lopez, Julio Barrera*. Gravitational Interactions Optimization. In *Learning and Intelligent OptimizatioN (LION 5) Rome, Italy - January 2011.*
- *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 (MICA I 2010)*, pages 3361-370. Springer-Verlag. **Pachuca, México. November 2010.**

## CONFERENCES, SEMINARS & WORKSHOPS Given

- 10mo Congreso Estatal de Ciencia, Tecnología e Innovación, en Ciencias de la Ingeniería y Tecnología. PSO con Nichos Interactivos y Búsquedas locales con Quasi-Newton (Morelia, México. September 2015 )
- 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).

#### **Attended**

- 5th HYCON2 Ph.D. School on Control of Networked and Large-Scale Systems and the EFFI-NET Ph.D. School on Control of Drinking Water Networks (Lucca Italy, 1-5 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, 8-12 of August 2011)