

Dr. Javier Ferrer

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"If I have seen further, it is by standing upon the shoulders of giants"

Academic Degrees

PhD in Computer Science

January, 2016

UNIVERSITY OF MÁLAGA

Spain

- PhD Thesis: Optimization Techniques for Automated Software Test Data Generation

Master in Software Engineering and Artificial Intelligence

September, 2009

UNIVERSITY OF MÁLAGA

Spain

- Master Thesis: Optimization in Software Engineering

Master in Education (CAP)

September, 2006

UNIVERSITY OF MÁLAGA

Spain

Publications

JOURNAL ARTICLES

Intelligent Testing of Traffic Light Programs: Validation in Smart Mobility Scenarios

Javier Ferrer, José García-Nieto, Enrique Alba, Francisco Chicano

Mathematical Problems in Engineering pp. 1–19. 2016

Search based algorithms for test sequence generation in functional testing

Javier Ferrer, Peter M. Kruse, Francisco Chicano, Enrique Alba

Information and Software Technology pp. 419–432. 2015

Estimating software testing complexity

Javier Ferrer, Francisco Chicano, Enrique Alba

Information and Software Technology pp. 2125–2139. 2013

Evolutionary algorithms for the multi-objective test data generation problem

Javier Ferrer, Francisco Chicano, Enrique Alba

Software: Practice and Experience pp. 1331–1362. 2012

On the Correlation between Static Measures and Code Coverage using Evolutionary Test Case Generation

Javier Ferrer, Francisco Chicano, Enrique Alba

Decision-Making in Software pp. 50–61. 2009

CONFERENCE PROCEEDINGS

Smart mobility by optimizing the traffic lights: A new tool for traffic control centers

Yesnier Bravo, Javier Ferrer, Gabriel Luque, Enrique Alba

Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2016

Aplicando programación lineal entera a la búsqueda de conjuntos de productos de prueba priorizados para líneas de productos software

Javier Ferrer, Francisco Chicano, Roberto Erick Lopez-Herrejon, Enrique Alba

Jornadas de Ingeniería del Software y Bases de Datos (JISBD), 2016

Sistema Inteligente para la Recogida de Residuos en las Ciudades basado en Predicciones de Llenado

Javier Ferrer, Enrique Alba, Francisco Chicano

I Congreso Ciudades Inteligentes, 2015

Generación de Secuencias de Pruebas Funcionales con Algoritmos Bio-inspirados

Javier Ferrer, Peter M Kruse, Francisco Chicano, Enrique Alba

Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados (MAEB'15), 2015

Comparative Analysis of Classical Multi-Objective Evolutionary Algorithms and Seeding Strategies for Pairwise Testing of Software Product Lines

Roberto E Lopez-Herrejon, Javier Ferrer, Francisco Chicano, Alexander Egyed, Enrique Alba

IEEE Congress on Evolutionary Computation (CEC), 2014

- Towards a Benchmark and a Comparison Framework for Combinatorial Interaction Testing of Software Product Lines
Roberto E Lopez-Herrejon, Javier Ferrer, Francisco Chicano, Evelyn Nicole Haslinger, Alexander Egyed, Enrique Alba
ArXiv. 2014
- A Hitchhiker's Guide to Search-Based Software Engineering for Software Product Lines
Roberto E Lopez-Herrejon, Javier Ferrer, Francisco Chicano, Lukas Linsbauer, Alexander Egyed, Enrique Alba
ArXiv. 2014
- A Parallel Evolutionary Algorithm for Prioritized Pairwise Testing of Software Product Lines
Roberto Erick Lopez-Herrejon, Javier Javier Ferrer, Francisco Chicano, Evelyn Nicole Haslinger, Alexander Egyed, Enrique Alba, Javier Ferrer, Francisco Chicano, Evelyn Nicole Haslinger, Alexander Egyed, Enrique Alba
Genetic and Evolutionary Computation Conference (GECCO'14), 2014
- Optimising Traffic Lights with Metaheuristics: Reduction of Car Emissions and Consumption
Jose G Nieto, Javier Ferrer, Enrique Alba
International Joint Conference on Neural Networks, 2014
- Validación Inteligente para la Sincronización de Semáforos Basada en Feature Models
Javier Ferrer, Jose Garcia-Nieto, Enrique Alba, Francisco Chicano
Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados (MAEB'13), 2013
- Multi-objective Optimal Test Suite Computation for Software Product Line Pairwise Testing
Roberto E Lopez-Herrejon, Francisco Chicano, Javier Ferrer, Alexander Egyed, Enrique Alba
IEEE International Conference on Software Maintenance, 2013
- Evolutionary algorithm for prioritized pairwise test data generation
Javier Ferrer, Peter M. Kruse, Francisco Chicano, Enrique Alba
Genetic and Evolutionary Computation Conference (GECCO'12), 2012, New York, USA
- Elementary landscape decomposition of the test suite minimization problem
Francisco Chicano, Javier Ferrer, Enrique Alba
Search Based Software Engineering, 2011
- Benchmark Generator for Software Testers
Javier Ferrer, Francisco Chicano, Enrique Alba
Artificial Intelligence Applications and Innovations, 2011
- Correlation Between Static Measures and Code Coverage in Evolutionary Test Data Generation.
Javier Ferrer, Francisco Chicano, Enrique Alba
International Journal of Software Engineering and Its Applications pp. 57–78. 2010
- Measuring Testing Complexity
Javier Ferrer, Francisco Chicano, Enrique Alba
Tech. rep., 2010
- Dealing with inheritance in OO evolutionary testing
Javier Ferrer, Francisco Chicano, Enrique Alba
Genetic and evolutionary computation - GECCO '09, 2009, New York, USA

BOOK CHAPTERS

- Evolutionary computation for software product line testing: An overview and open challenges
Roberto E. Lopez-Herrejon, Javier Ferrer, Francisco Chicano, Alexander Egyed, Enrique Alba
Studies in Computational Intelligence, 2016

Research Projects

moveON - Metaheuristics, Holistic Intelligence, and Smart Mobility

REFERENCE: TIN2014-57341-R

National Project
January 2015 - December 2017

maxCT - Smart Mobility: Wi-Fi, Routes and Pollution

REFERENCE: AOP GGI3003IDII

Regional Project
January 2015 - December 2015

roadME: Fundamentals for Real World Applications of Metaheuristics: The vehicular case

REFERENCE: TIN2011-28194

National Project
January 2012 - December 2015

M*: Multidisciplinary Multiobjective Metaheuristics

REFERENCE: TIN2008-06491-C04-01

National Project
January 2009 - December 2012

Intelligent Design of Wireless Communication Networks

REFERENCE: P07-TIC-03044

Regional Project
January 2008 - June 2012

Research Networks

SEBASNet: Spanish excellence network of search based software engineering

REFERENCE: TIN2015-71841-REDT

National Network

December 2015 - November 2017

Teaching Experience

Programming I

1ST YEAR (CORE SUBJECT)

In Telematics Engineering

2016 - 2017

Concurrent Programming

3RD YEAR (CORE SUBJECT)

In Electronic Devices Engineering

2016 - 2017

Computer Science Applied to Public Management

1ST YEAR (CORE SUBJECT)

In Public Management and Administration

2015 - 2016

Object-Oriented Programming

1ST YEAR (CORE SUBJECT)

In Computers Engineering

2015 - 2016

Fundamentals of Computer Science

1ST YEAR (CORE SUBJECT)

In Mechanical Engineering

2015 - 2016

Object-Oriented Programming

1ST YEAR (CORE SUBJECT)

In Health Engineering

2014 - 2015

Fundamentals of Computer Science

1ST YEAR (CORE SUBJECT)

In Industrial Electronic Engineering

2014 - 2015

Program & Organization Committees

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|------|--|------------------------|
| 2017 | Organizing Committee , Summer School on Search Based Software Engineering | <i>Málaga, Spain</i> |
| 2017 | Publicity Chair , The Genetic and Evolutionary Computation Conference | <i>Berlin, Germany</i> |
| 2017 | Program Committee , Search Based Software Engineering in GECCO | <i>Berlin, Germany</i> |
| 2016 | Program Committee , Real World Applications in GECCO | <i>Denver, USA</i> |
| 2016 | Organizing Committee , International Conference on Smart Cities: smartCT'16 | <i>Málaga, Spain</i> |
| 2016 | Program Committee , International Conference on Smart Cities: smartCT'16 | <i>Málaga, Spain</i> |
| 2009 | Organizing Committee , VI Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados | <i>Málaga, Spain</i> |

Stay in Research Centres

Berner & Mattner

RESEARCH ACTIVITIES

Berlin, Germany

September 2011 - December 2011

Honors & Awards

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|------|---|----------------------------|
| 2013 | Finalist , Three Minutes Thesis | <i>Madrid, Spain</i> |
| 2012 | Best paper nomination , Evolutionary algorithm for prioritized pairwise test data generation | <i>Philadelphia, U.S.A</i> |

Extracurricular Activities

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|---------|---|--------------|
| 2015-16 | European Researchers' Night , 2015 and 2016 editions in Málaga | <i>Spain</i> |
| 2014 | EVA Summer School Attendance , Galicia | <i>Spain</i> |
| 2012-14 | +500 hours of Teaching Training Courses , University of Málaga | <i>Spain</i> |
| 2012-13 | +200 hours of English Courses , University of Málaga | <i>Spain</i> |