Andrés Herrera Poyatos

Curriculum Vitae

Education

2009-2013 **Estalmat**, *SAEM Thales*, Andalucía.
A project to detect and stimulate the precocious mathematical talent

2011-2013 **High School**, *Instituto Trevenque*, La Zubia, Academic average grade – 9.84 / 10. Access to university grade – 13.63 / 14.

2013-Now **Double Degree in Computer Science and Mathematics**, *Universidad de Granada*, Granada, Computer Science average grade – 9.78 / 10. Mathematics average grade – 9.93 / 10.

Computer Science Subjects Grades at University

Subject	Grade	Qualification
Programming Fundaments	10.0	Cum Laude
Software Fundaments	9.6	Cum Laude
Physics and Technology Fundaments	10.0	Cum Laude
Lógica y Métodos Discretos	10.0	Cum Laude
Programming Methodology	10.0	Cum Laude
Tecnología y Organización de los Computadores	9.6	Excelent
Estructura de Datos	10.0	Cum Laude
Estructura de Computadores	9,6	Cum Laude
Sistemas Operativos	9.2	Excelent

Mathematics Subjects Grades at University

Subject	Grade	Qualification
Cálculo I	10.0	Cum Laude
Geometría I	10.0	Cum Laude
Cálculo II	10.0	Cum Laude
Geometría II	10.0	Cum Laude
Estadística Descriptiva y Probabilidad	9.8	Cum Laude
Métodos Numéricos I	9.8	Cum Laude
Análisis I	9.8	Cum Laude
Topología I	10.0	Cum Laude
Álgebra I	10.0	Cum Laude

La Zubia – Granada, Spain
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2014 **Aproximación práctica a la ciencia de datos y big data: herramientas Knime, R Hadoop y Mahout**, *Universidad Internacional de Andalucía*, Baeza, Grade 10/10.

2015 **The Data Scientist's Toolbox**, *Coursera*, Johns Hopkins University, Average grade – 100.0 %. Statement of Accomplishment with Distiction.

2015 **R Programming**, *Coursera*, Johns Hopkins University, Average grade – 100.0 %. Verified Statement with Distiction.

2015 **Algorithms: Design and Analysis, Part 1**, *Coursera*, Stanford University, Average grade – 98.0 %. Statement of Accomplishment.

Papers

Title *Algoritmo Genético con Diversificación Voraz y Equilibrio entre Exploración y Explotación*

Authors Andrés Herrera Poyatos & Professor Francisco Herrera

Published 2105 - Conference at *MAEB 2015*

Description Genetic algorithms may converge too fast if population diversity is not enough to keep an equilibrium between exploration and exploitation. In this work we propose an hybrid genetic algorithm which keep the population diversity updating the population with new solutions obtained from an randomized greedy algorithm. It also achieves a good equilibrium between exploration and exploitation using parents and children competition and other specific components for the algorithm.

Awards

2009 Top 5 in XXV Thales Mathematics Olympiad - Granada. Classified for the regional phase.

2009 Selected for ESTALMAT - Andalucía, a project to detect and stimulate the precocious mathematical talent.

2011 2nd place - I Short Story Competition, "Al borde de lo inconcedible", Villa de la Zubia

2012 1st place - II Short Story Competition, "Al borde de lo inconcedible", Villa de la Zubia

2013 4th place - XIII Mathematics Olympiad "Guadalentín" - 16 to 17 years old

2013 4th place - XXIV Spanish Physics Olympiad - Local Phase in Granada

2013 1st place - XLIX Spanish Mathematics Olympiad - Local Phase in Granada

2013 Top 12 - XLIX Spanish Mathematics Olympiad - Regional Phase in Andalucía. Classified for the XLIX Spanish Mathematics Olympiad - National Phase representing Andalucía

2013 Honourable Mention - Best High School Academic Record in La Zubia

2013 Top 10 students with highest grades - University Access Exam (PAU) in Granada (13.63 / 14)

Languages

Spanish **Mothertongue**

English **Certificate in Advanced English (CAE)**

Programming Languages

Basic	octave, Maxima, Prolog, Haskell
Intermediate	Scala, LaTeX, Ruby, Java
Advanced	Python, R, c++, c, Bash

Interests

- Learning. Coursera Profile
- Algorithms. Hackerrank Profile
- Machine Learning. Kaggle Profile
- Heuristics. An Open Source Project. Genetic Algorithms
- Writing. Computer science and mathematics dissemination. A blog where I write
- Mathematics.
- Solving real world problems applying mathematics and computer science theory.

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