



Andrés Herrera Poyatos

Curriculum Vitae

Personal Information

- **Fist name:** Andrés
- **Last name:** Herrera Poyatos
- **Date of birth:** August 9th, 1995
- **Address:** N° 48 La Yedra Street, La Zubia, Granada, 18140, Spain
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Education

- 2009-2013 **Estalmat, SAEM Thales**, University of Granada, Granada, Spain.
A project to detect and stimulate the precocious mathematical talent.
- 2011-2013 **High School, IES Trevenque**, La Zubia, Granada, Spain.
 - Cum Laude at High School.
 - Access to university grade – 13.63 / 14 (13.63 out of 14).
- 2013-Present **Double Degree in Computer Science and Mathematics**, *University of Granada*, Granada, Spain.
The double degree lasts 5 years and contains 72 ECTS credits per year. The following table summarizes my university grades (each subject's grade is presented in the appendix).

| Degree | Number of taken subjects | Average grade | Number of Cum Laude grades |
|------------------|--------------------------|---------------|----------------------------|
| Computer Science | 18 | 9.411 / 10 | 13 |
| Mathematics | 17 | 9.835 / 10 | 14 |

- 2014 **Practical data science and big data: Knime, R, Hadoop and Mahout tools**, *International University of Andalucía (UNIA)*, Baeza, Grade 10 / 10.
- 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.

Publications

Conferences

- Andrés Herrera-Poyatos, Francisco Herrera. *Algoritmo Genético con Diversificación Voraz y Equilibrio entre Exploración y Explotación (Genetic Algorithm with Greedy Diversification and Equilibrium between Exploration and Exploitation)*, La Zubia – Granada, Spain

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Exploration and Exploitation). 10th Spanish Conference on Metaheuristics, Evolutionary and Bio-inspired Algorithms ([MAEB 2015](#)), pp. 9–18, 2015.

- Andrés Herrera-Poyatos, Francisco Herrera. *Algoritmo Memético Equilibrado con Diversificación Voraz. (Memetic Algorithm with Diversity Equilibrium based on Greedy Diversification)*. 16th National Conference on Artificial Intelligence: 2nd Workshop on Metaheuristics and Evolutionary Algorithms ([JAEM 2015](#)), 2015.
- Daniel Peralta, Andrés Herrera-Poyatos, Francisco Herrera. *Un Estudio sobre el Preprocesamiento para Redes Neuronales Profundas y Aplicación sobre Reconocimiento de Dígitos Manuscritos. (A Study on Data Preprocessing for Deep Neuronal Network and its Application to Handwriting Digit Recognition)*. 17th National Conference on Artificial Intelligence ([CAEPIA 2016](#)), 2016.

Journals

- Andrés Herrera-Poyatos, Francisco Herrera. *Genetic and Memetic Algorithm with Diversity Equilibrium based on Greedy Diversification*. Submitted to Information Sciences. Date of submission: March 25th, 2016.

Experience

September 2015 – July 2016 **Research training contract on metaheuristics and software development**, *Fundación General Universidad de Granada - Empresa*.
Computational Intelligence techniques applied to the development of optimization algorithms for resource scheduling on bus and coach companies.

Awards

- 2009 Top 5 in XXV Thales Mathematics Olympiad - Granada (12 – 13 years old). Classified for the regional phase in Andalucía.
- 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 - XXIV Spanish Physics Olympiad - Local Phase in Granada province.
- 2013 1st place - XLIX Spanish Mathematics Olympiad - Local Phase in Granada province.
- 2013 Top 12 - XLIX Spanish Mathematics Olympiad - Regional Phase in Andalucía. Classified for the XLIX Spanish Mathematics Olympiad - National Phase.
- 2013 Honourable Mention to the Best High School Academic Record in La Zubia, Granada, Spain.
- 2013 Award Top 10 students with highest grades in Granada province - University Access Exam (PAU) (Grade: 13.63 / 14)

Languages

Spanish **Mother tongue**
English **Cambridge English: Advanced (CAE)**

Interests

Topics on which I am interested and some related links.

- Mathematics.
- Writing. Mathematics and computer science dissemination. [A blog where I write](#) (Double Degree in Mathematics and Computer Science's blog). I have written the following posts:
 - o Algoritmos Genéticos (Genetic Algorithms).
 - o Problemas – Fibonacci GCD (Problems – Fibonacci GCD). Written in collaboration with Mario Román.
 - o Teorema de Dini (Dini's theorem).
 - o Segment trees and Range minimum query.
- Learning. [My Coursera Profile](#).
- Algorithms. [My Hackerrank Profile](#).
- Heuristics. [An Open Source Project](#). [Genetic Algorithms](#).

Appendix: University Subjects Grades

Subjects grades in Computer Science Degree

| Subject | Grade | Qualification |
|--|-------|---------------|
| Fundamentals of Programming | 10 | Cum Laude |
| Fundamentals of Software | 9.6 | Cum Laude |
| Fundamentals of Physics and Technologies | 10 | Cum Laude |
| Logic and Discrete Methods | 10 | Cum Laude |
| Programming Methodology | 10 | Cum Laude |
| Computers Technology | 9.6 | Excellent |
| Data Structures | 10 | Cum Laude |
| Computer Structures | 9.6 | Cum Laude |
| Operating Systems | 9.2 | Excellent |
| Algorithms | 9.4 | Cum Laude |
| Computer Architecture | 9.5 | Cum Laude |
| Object-Oriented Programming and Design | 9 | Cum Laude |
| Fundamentals of Data Bases | 9.1 | Cum Laude |
| Fundamentals of Computer Networks | 7.6 | Good |
| Models of Computation | 10 | Cum Laude |
| Concurrent and Distributed Systems | 9.3 | Excellent |
| Fundamentals of Software Engineering | 7.5 | Good |
| Artificial Intelligence | 10 | Cum Laude |





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Subjects Grades in Mathematics Degree

| Subject | Grade | Qualification |
|--|-------|---------------|
| Calculus I | 10 | Cum Laude |
| Geometry I | 10 | Cum Laude |
| Calculus II | 10 | Cum Laude |
| Geometry II | 10 | Cum Laude |
| Descriptive Statistics and Introduction to Probability | 9.8 | Cum Laude |
| Numerical Methods I | 9.8 | Cum Laude |
| Analysis I | 9.8 | Cum Laude |
| Topology I | 10 | Cum Laude |
| Algebra I | 10 | Cum Laude |
| Analysis II | 10 | Cum Laude |
| Geometry III | 9.8 | Excellent |
| Mathematical Models I | 10 | Cum Laude |
| Differential Equations I | 9 | Excellent |
| Probability | 9.5 | Excellent |
| Numerical Methods II | 9.5 | Cum Laude |
| Complex Analysis | 10 | Cum Laude |
| Algebra II | 10 | Cum Laude |

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