| Curriculum Vitae | David Fernández Barrero |
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| **PHOTO** |  |
| **Education** |  |
| 2007-2011 | PhD in Computer Science |
| 2004-2007 | Advanced Studies Certificate |
| 2004 | Telecommunications Engineering |
| **Nationality** | Spanish |
| **Key skills/Training** | Machine Learning, Evolutionary Algorithms |
| **Summary** |  |
| **Experience** |  |
| **2018 - Present** | Associate Professor, Universidad de Alcalá.  Participation in projects:   * + *Using Machine Learning as methods for maintenance prediction errors based on the condition in ships of the Spanish Navy (SOPRENE)*. Years: 15/10/2018-15/10/2020. Funding company: Indra Sistemas, S.A. Grant: 70.000€.   + *Placement Opportunities With Entrepreneurial Reach*. Erasmus+ project. Ref. 601187-EPP-1-2018-1-LU-EPPKA2-KA (Call EAC/A05/201). Partners: The European University Foundation - Campus Europae (coordinator), Technoport S.A., Universidad de Alcalá, Asociacion Tetuan Valley, Innovaatio Oy Uusi Tehdas, Aristotle University of Thessaloniki, Innovation Zone, Politechnika Łódzka. Years: 1/11/2018-30/9/2021. Grant: 987.195 €.   + *Detection of manufacturing defects in PVC profiles using Machine Learning*. Funding Company: Profine Iberia S.A.U. Grant: 20K€. Year: 2018-19. |
| **2012 – 2017** | Associate Professor, Universidad de Alcalá.  Participation in projects:   * + Automatic detection of emergencies based on patterns of behavior in dependent persons. Funding Agency: UAH   + Detection of falls by means of a triaxial accelerometer in an environment of remote attention to dependence. Funding Agency: UAH   + Cooperative systems for autonomous exploration missions. Funding Agency: ESA   + Bioinspired algorithms in complex ephemeral environments. Funding Agency: Spanish Government |
| **2006-2011** | Lecturer, Universidad de Alcalá.  Participation in the projects:   * + Autonomy for Interplanetary missions. Funding Agency: ESA.   + AI Planning and monitoring for elder and handicap assistance. Funding Agency: Spanish Government   + Interactive and Intelligent communications in big surfaces I & II. Funding Agency: Spanish Government   + Logistic re-planning based on regression techniques. Funding Company: Espi & Le Barbier   + Resources planning of a ground monitoring station for optimal exploitation. Funding Company: IXION S.L.   + COLlaborative Vehicles Autonomous Exploration. Funding Company: IXION S.L   + Evaluation and Automated Planning to AI Learning Processes in Virtual Educational Environments. Funding Agency: Spanish Government   + An AI Planning-based Tool for Scheduling Satellite Nominal Operations. Funding Agency: Spanish Government.   + Automatic control and planning system for long-life learning processes in electronic education environments (Plan4Learn). Funding Agency: Spanish Government |
| **2005-2006** | Systems Administrator, RedIRIS / Red.es (Spanish NREN) |
| **2001** | Antenna engineer, CNES (*Centre National d’Etudes Spatiales*). Toulouse, France |
| **1999** | Self-employed instructor |
| **Teaching courses** | * Artificial Intelligence Techniques for Space (Master level, Space Technology, UAH) * Intelligent Robotic Control (Master level, Industrial Engineering, UAH) * Videogame technology (bachelor level, UAH) * Advanced Robot Control (bachelor level, UAH) * Programming languages: C, Java and Python (bachelor level, UAH) * Operating Systems (bachelor level, UAH) |
| **Publications** | Complete list of publications are available on  <https://atc1.aut.uah.es/~david/publications/>  Some publications related to the proposal:   * Carlos-Javier Hernández-Castro, María D. R-Moreno, David F. Barrero and Stuart Gibson. Using Machine Learning to identify common flaws in CAPTCHA design: FunCAPTCHA case analysis. Computers and Security, 2017. * Carlos-Javier Hernández-Castro, María D. R-Moreno and David F. Barrero. Machine learning and empathy: the Civil Rights CAPTCHA. Concurrency and Computation: Practice and Experience, Volume 28, Issue 4, Pages 1310-1323, 2016. * Gema Bello, David F. Barrero, María D. R-Moreno and David Camacho. Acquisition of Business Intelligence from Human Experience in Route Planning. Enterprise Information Systems, Volume 9, Issue 3, pp:303-323, 2015. * Alvaro Cuesta, David F-Barrero and María D. R-Moreno. A Framework for Massive Twitter Data Extraction and Analysis. Malaysian Journal of Computer Science, 27 (1): 50-67, March 2014, ISSN 0127-9084. * Armando Collado, María D. R-Moreno, David F. Barrero and Daniel Rodríguez. Machine learning approach to detect falls on elderly people using sound. Proceedings of the 30th International Conference on Industrial, Engineering, Other Applications of Applied Intelligent Systems (IEA/AIE'2017), Arras, France, June 2017. |
| **Research stays** | * NASA-Jet Propulsion Laboratorory, Pasadena, USA * University of Portsmouth, UK (two monts) * University of Kent, Canterbury, UK (two months). |