

Professor Enrique GARCIA-BERRO

Date of birth: March, 3rd, 1959

Education:

1982: Graduated at Universitat de Barcelona (UB) in Physics.

1987: Ph.D. in Astrophysics at Universitat de Barcelona (UB).

Professional Experience and Skills:

He graduated in 1982, with the highest honors (ranked 1st in his course). He started his career on theoretical astrophysics in 1982, with a Master Thesis devoted to the design and implementation of a stellar evolutionary code, which was used to compute stellar evolutionary sequences. This code incorporated the most recent physical inputs at that time and a sophisticated adaptive mesh refinement scheme.

In 1983 he started his Ph.D. in stellar evolution, working specifically in the field of the cooling of white dwarfs. As a result of his Ph.D. work he published a paper in *Nature*. In 1987 he earned his Ph.D. degree in Theoretical Astrophysics from the Universitat de Barcelona with a Cum Laude qualification.

In 1987 he obtained a permanent position (Associate Professor) at the Universitat Politècnica de Catalunya in the Applied Physics Departament. Since then he has lectured Physics, Astrophysics and Space Systems Engineering.

In 2003 he earned the position of Full Professor at the Universitat Politècnica de Catalunya in the Applied Physics Department.

In 1991 he moved as post-doctoral research scholar to the University of Illinois at Urbana-Champaign (UIUC), under the auspices of the Spanish Ministry of Education and Science, working at the National Center for Supercomputer Applications (NCSA) facilities of the National Science Foundation (NSF). He stayed there for one year. He returned to the UIUC 3 months each year for the next 3 years (1993 to 1996), under the auspices of the NSF.

In 2001 he was invited by the Japan Society for Promotion of Science to give a series of lectures in Hokkaido and Tokyo for a period of three months.

In 1997 he was appointed as Director of the Applied Physics Department of the UPC. He has also served from 2002 to 2005 as deputy director of the Institute of Space Studies of Catalonia. In 2006 he started to serve as Vice-Rector for Quality Assessment of the UPC. In 2008 he became Vice-Rector of Academic Staff. He was also deputy Rector of the UPC from 2009 to 2013. In 2013 he became the first Director of the Serra Húnter Program of the Catalan university system, aimed to recruit highly qualified faculty members (from 2012 to 2015).

He has advised 14 Ph. D. Theses, 10 Master Theses, and 28 Degree Theses. He has authored 185 papers in refereed journals (3 of them in *Nature*), 4 review papers (*The Astronomy & Astrophysics Review...*), 2 books, 10 book chapters, 144 contributions to proceedings, and 96 technical reports (NATO, ESA, and others). He has an h-factor 39 (ISI).

He has been Principal Investigator of 15 national scientific projects (Spanish Ministry of Education and Science, Spanish Ministry of Innovation and Science, and Generalitat de Catalunya) and he has participated as regular member in another 8 projects. He has directed 2 contracts with public administrations (NATO and ESA) and 4 contracts with

private companies (Sun, IBM, GTD...) and has participated in another 10 contracts. He has been Principal Investigator of 1 international scientific project (Joint Spanish-German project) and has participated in another 14 international scientific projects (USA, Italy, France, Chile...).

He is co-inventor of a patent — Fully Adaptive Prediction Error Coder (FAPEC): a universal lossless coder, PCT/ES2009/000336. He has been awarded 5 research periods, 5 teaching periods (with excellence mention), and 4 management periods. He is member of several scientific societies (SEA, AAS, EAS, IAU) and has been expert of the Spanish Ministry of Education and Science, of the Argentinean Ministry of Education and Science, of the Autonomous Government of Catalonia, of the Autonomous Government of Andalusia, of ESA, of the Science and Technology Funding Council (UK), of the Technological Accreditation Committee AIDIT, and of other funding agencies. He has also been appointed referee of 18 scientific journals (*Nature*, *The Astrophysical Journal*, *M.N.R.A.S.*, *Astronomy & Astrophysics*, *Aerospace Science & Technology*, *IEEE Magazine for Aerospace and Electronic Systems...*).

He has authored 10 publications devoted to university management, 7 of them in peer-reviewed journals.

Five remarkable recent publications:

1. García-Berro, E., Torres, S., Althaus, L.G., Renedo, I., Lorén-Aguilar, P., Córscico, A.H., Rohrmann, R., Salaris, M., & Isern, J., 2010, A white dwarf cooling age of 8 Gyr for NGC 6791 from physical separation processes, *Nature*, **465**, 194–196.
2. Casanova, J., José, J., García-Berro, E., Calder, A., & Shore, S.N., 2011, Kelvin-Helmholtz instabilities as the source of inhomogeneous mixing in nova explosions, *Nature*, **478**, 490.
3. García-Berro, E., Lorén-Aguilar, P., Aznar-Siguán, G., Torres, S., Camacho, J., Althaus, L.G., Córscico, A. H., Külebi, B., & Isern, J., 2012, Double Degenerate Mergers as Progenitors of High-field Magnetic White Dwarfs, *Astrophys. J.*, **749**, 25.
4. Renedo, I., Althaus, L.G., Miller Bertollami, M.M., Romero, A.D., Córscico, A.H., Rohrmann, R.D., & García-Berro, E., 2010, New cooling sequences for old white dwarfs, *Astrophys. J.*, **717**, 183–195.
5. Althaus, L.G., Córscico, A.H., Isern, J., & García-Berro, E., 2010, Evolutionary and pulsational properties of white dwarfs, *Astron. & Astrophys. Rev.*, **18**, 471–566.