



## Resilient Microarchitectures

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resumen:

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Moore's Law will continue to fuel process technology evolution in the next decade. As a result, chip devices will be faster and less energy consuming. However, these devices will be more susceptible to faults and will exhibit a significant degree of variability in their behavior. In this talk, we will first describe the main sources of faults and variations in future process technologies, and then, we will discuss some of the main challenges and opportunities that they represent for future microprocessors.

sobre Antonio González:

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Antonio González received his M.S. and Ph.D. degrees from the Universitat Politècnica de Catalunya (UPC), in Barcelona, Spain. He is the founding director of the Intel Barcelona Research Center, started in 2002, whose research focuses on new microarchitecture paradigms and code generation techniques for future microprocessors. He has been a faculty member of the Computer Architecture Department of UPC since 1986 and became Full Professor in 2002.

He has published over 300 papers, has given over 80 invited talks, has filed over 40 patents and has advised 19 PhD thesis in the areas of computer architecture and compilers. He has served as an Associate Editor of the IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, ACM Transactions on Architecture and Code Optimization, IEEE Computer Architecture Letters and Journal of Embedded Computing. He has served on the program committees for over 100 international symposia in the field of computer architecture, including ISCA, MICRO, HPCA, ASPLOS, PACT, ICS, ISPASS, CASES and IPDPS. He has been program chair for ICS 2003, ISPASS 2003, MICRO 2004, HPCA 2008 and ISCA 2011, and general chair for MICRO 2008 among other symposia.

González's awards include the award to the best student in computer engineering in Spain graduating in 1986, the 2001 Rosina Ribalta award as the advisor of the best PhD project in Information Technology and Communications, the 2008 Duran Farrell award for research in technology, and the 2009 Aritmel National Award of Informatics to the Computer Engineer of the Year.