I am an experimental physicist working on condensed matter and solid-state physics. I received my PhD in 2007 under the joint supervision of Prof AM Cucolo at Salerno (Italy) and Prof MG Blamire at Cambridge (UK). I was investigating the symmetry of the order parameter in unconventional and high temperature superconductors with point contact Andreev Reflection techniques. During my visit at Cambridge (Nov 05-Oct 06), I fabricated and characterised ferromagnetic Josephson junctions, with potential applications for spintronics and quantum computing. Results from the latter topic [Phys.Rev.Lett. 97, 177003 (2006)] have attracted >100 citations. In 2009 I was awarded a Marie Curie IEF Fellowship (score: 97/100) by the European Commission, hosted by the Semiconductor Spintronics Group (Prof B Gallagher) at the University of Nottingham. I provided the first accurate measurement of the spin polarisation of the ferromagnetic semiconductor (Ga,Mn)As by combining scanning probe microscopy experiments (in a setup which I built at Nottingham) with a new theoretical modelling developed in collaboration with Prof M Eschrig, now at Royal Holloway London [Phys.Rev.B 83, 081305(Rapid) (2011)]. I also carried out the first detailed surface analysis of (Ga,Mn)As by atomic force microscopy, revealing the presence of self-organised periodic ripples. In collaboration with Prof V Holy at Prague, I unveiled a correlation between these structures and the uniaxial magnetic anisotropy, which had been observed in (Ga,Mn)As since a decade without a satisfactory microscopic explanation. This result has been praised as a potential cornerstone for the field [Appl.Phys.Lett. 98, 152503 (2011)]

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