

Curriculum Vitae of Patrick Bruno

Personal data

Birth date and place: 26 May, 1964, in Paris
Citizenship: France



Photo: Ch. Argoud/ESRF

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Education

- 1986 - 1989 : Ph.D. Thesis, at the Institut d'Électronique Fondamentale, Université Paris-Sud, Orsay (France);
supervisor: Jean-Pierre Renard;
title: "Anisotropie magnétique et hystérésis du cobalt à l'échelle du plan atomique: théorie et expérience";
jury composition: J. Friedel, G. Bayreuther, F. Gautier, J.-B. Theeten, and J.-P. Renard.
- 1986 : "Diplôme d'Études Approfondies" in Solid State Physics, Université Pierre et Marie Curie (Paris, France).
- 1986 : "Agrégation de Physique" (rank: 1st).
- 1983 - 1987 : Physics Studies in "École Normale Supérieure" (Saint-Cloud, France) and Université Pierre et Marie Curie (Paris, France).

Positions held

- since December 2007: Head of the Theory Group, European Synchrotron Radiation Facility, Grenoble

- 2000 – 2001 and 2006 – 2007: Managing Director of the Max Planck Institute of Microstructure Physics, Halle (Germany).
- 1998 – 2007: Scientific Member and Director at the Max Planck Institute of Microstructure Physics Halle (Germany); Director of the Theory Department.
- 1991 – 1998: CNRS Staff Scientist (“Chargé de Recherche”) at the “Institut d’Électronique Fondamentale,” University Paris-Sud, Orsay (France).
- 1989 – 1991: Post-doc, University of Regensburg (Germany).

Sabbaticals

- April – June 2005: Invited Professor, École Polytechnique Fédérale de Lausanne
- August – October 2002: Visiting scientist, Kavli Institute of Theoretical Physics, University of California at Santa Barbara
- May – November 1997: Visiting scientist, University of Nagoya

Honors

- 2009: Grand Prix Jean Ricard of the French Physical Society
- 2009: Ernst Mach Medal of the Academy of Sciences of the Czech Republic
- 2008: Member of the National Academy of Sciences of Germany (“Leopoldina”)
- 2007: Leibniz Prize of the German Research Foundation
- 1999: Adjunct Professor of Theoretical Physics at the Martin-Luther University Halle-Wittenberg.
- 1997: Fellowship of the Japan Society for the Promotion of Science.
- 1994: CNRS Bronze Medal.
- 1989: Fellowship of the Alexander von Humboldt Foundation

Teaching activities:

- 2005: Series of lectures on “Geometric phase in Magnetism”, École Polytechnique Fédérale de Lausanne
- since 1999: various series of lectures at the Martin-Luther University Halle-Wittenberg
- 1991 – 2005: several series of lectures in advanced physics schools in Italy, Germany, Brazil, France, Czech Republic, and Poland
- 1986 – 1987: École Normale Supérieure de Saint-Cloud (training for the “Agrégation” in physics and in chemistry)

Research activities:

- since 2005: Diabolical points in molecular magnets
- since 2002: Berry phase related phenomena in nanostructures
- since 2001: magnetic semiconductors
- since 2001: Magnetic Casimir effect
- since 2000: exchange interactions and Curie temperature in bulk and layered magnetic materials
- since 1999: anomalous Hall effect
- 1999: micromagnetism of nanostructures

- since 1996: spin-electronics
- 1994 – 1998: quantum size effects in magneto-optics
- 1991 – 1997: interlayer exchange coupling
- 1989 – 1992: thermodynamics of two-dimensional ferromagnets
- 1986 – 1991: magnetization reversal processes in ultrathin films
- 1986 – 1991: magnetic anisotropy in ultrathin films

Scientific publications and communications

- 15 review papers and contributions to books;
- over 200 original publications in scientific journals, of which 2 papers selected in the "Hot Papers in Physics" of the Institute of Scientific Information (selection of the 10 most cited papers in physics for a period of 2 months). These publications totalize more than 7000 citations, 14 of them exceeding 100 citations.
- over 160 invited conferences (of which 3 plenary talks)