

Curriculum vitae
of
Anna Perona

Personal data

Born	in Biella, Italy, on March 15 th , 1969
Nationality	Italian
Civil state	Unmarried
Home address	via Cavalieri di Vittorio Veneto 135 Andorno Micca (BI), Italy postcode: 13811
Work address	Dipartimento di Energetica, Politecnico di Torino corso Duca degli Abruzzi 24 Torino, Italy postcode: 10129
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Education

27/03/2008	Ph.D. degree in Fluid Dynamics at the Politecnico di Torino. Thesis title: 'Evolution of suprathreshold particles during reconnection events in magnetized plasmas'. French Ph.D. score: très honorable.
2005, January – 2007, December	Ph.D. in Fluid Dynamics in cotutorship between the Department of Aeronautic and Space Engineering of the Politecnico di Torino, (scientific supervisor prof. F. Porcelli), and the École Doctorale de Physique et Sciences de la Matière de l'Université de Provence (Aix-Marseille I) under the

tutorship of prof. D. F. Escande (Université de Provence).

20/12/2004

Graduated in Physics at the Facoltà di Scienze MFN, Università di Torino. Thesis title: 'Drift waves and turbulence in magnetically confined plasmas' (scientific supervisor prof. F. Porcelli). Grade:110/110.

Professional experience

2008, January – 2011, January

Post Doctoral fellow in the Burning Plasma Research Group of Politecnico di Torino for a research project on the generation of energetic electrons during collisionless magnetic reconnection in magnetized plasmas, in collaboration with dr L.-G. Eriksson (currently at the European Commission in Brussels, before 2008 working at CEA in Cadarache, France).

2009, March

Euratom mobility contract at the ULB (Brussels) in order to complete the parallelization, in collaboration with dr L.-G. Eriksson, of the 2D kinetic code describing the electrons behavior during magnetic reconnection events written during her Ph.D.

2008, April and July

Euratom secondment contract at JET during the C20-C25 experimental campaign working on the numerical investigation of MeV-range fast ion losses induced by fishbones during a JET discharge, in collaboration with dr C. Perez von Thun, dr S. Sharapov and dr S. Pinches of UKAEA.

1-31/03/2007

Euratom secondment contract at JET in order to complete her Ph.D work on impurity and energetic ion behaviour in the presence of a n=1 kink perturbation.

2006 October – 2007 November

Stay at CEA in Cadarache, funded by the Italian-French University (Vinci grant, 2006) and by Euratom mobility, in order to develop a 2D kinetic code describing the electrons behavior during a collisionless reconnection event, under the supervision of dr L.-G. Eriksson.

11/02/2006 – 20/08/2006

Stage at the JET Laboratory of Culham (UK), funded by a grant of the Italian Embassy in London, under the supervision of dr S. Sharapov and dr S. Pinches of UKAEA. The subject of the work was the modelling of fast ions behaviour in the presence of a n=1 kink perturbation using the HAGIS code. Part of this work was devoted to the mapping of the perturbed magnetic surfaces in HAGIS.

1-31/08/2004

Stage at the Max-Planck-Institut für Plasmaphysik (Garching, München) under the supervision of dr Bruce Scott in order to improve her own knowledge of his code based on Hasegawa-

Wakatani equations for her first class degree work.

Teaching activity

Academic Year 2008-2009	class exercises on Mathematical Analysis for Architecture (English course) at Politecnico di Torino.
Academic Year 2009-2010	class exercises on Mathematical Analysis for Architecture (English course) at Politecnico di Torino.

Grants

2006 grant of the “Vinci program” of the French- Italian University Centre, to carry on part of the Ph.D. research in France;

2006 grant of the Italian Embassy in London for a two months stage at JET.

Linguistic tools

- Very good knowledge of French (Alliance Française, final score: très honorable);
- Very good knowledge of English (PET Cambridge, with merit);
- Good knowledge of German.

Computer skills

Environments	Linux, Windows
Software	IDL, Matlab
Programming languages	Fortran, MPI

Schools & Workshops

2005, November 2 – 3	Introduction to Fortran 90, CINECA (Casalecchio di Reno, BO), Italy
2005, July 18 – 29	42 nd Summer Plasma Physics School, Culham, Oxfordshire, UK
2004, September 6 – 17	Italian National School of Physics of Matter, Torino

Conference organization

Member of the Organizing Committee of the 11th Easter Plasma Meeting, Torino, 15 - 17 April 2009 (http://kalimnos.polito.it/easter_meeting_2009.html).

Conference communications

“Electron response to inertial magnetic reconnection”, invited talk at the IAGA2 Conference (International Association of Geomagnetism and Aeronomy), Cairo, 5 - 8 December 2009.

Poster contributions

- 1) A. Perona, L.-G. Eriksson, D. Grasso, “Generation of Energetic Electron during Collisionless Magnetic Reconnection”, poster presented at the 13th European Fusion Theory Conference, Riga, 12 – 15 October 2009 (<http://plasma2.ulb.ac.be/~eftc/>).
- 2) C. Perez von Thun, A. Perona, T. Johnson, S. E. Sharapov, M. Reich, V. Kiptily, M. Cecconello, S. D. Pinches, M. García Muñoz, M. Brix, I. Voitsekhovitch, and JET EFDA contributors, “MeV-range fast ion losses induced by fishbones on JET”, poster for the IAEA TM on energetic particles, Kiev, 21 – 23 September 2009 (has been presented by C. Perez von Thun, <http://www.kinr.kiev.ua/TCM/index.html>).
- 3) A. Perona, L.-G. Eriksson, D. Grasso, “Energetic Electrons Generation during Collisionless Magnetic Reconnection”, poster presented at the 11th Easter Plasma Meeting, Torino, 15 - 17 April 2009.
- 4) A. Perona, L.-G. Eriksson, D. Grasso, “Generation of Suprathermal Electrons during Magnetic Reconnection”, poster presented at the 35th EPS, Hersonissos (Crete), 9 - 13 June 2008.
- 5) A. Perona, S. D. Pinches, S. E. Sharapov and F. Porcelli, “Modelling of energetic ions behaviour in the n=1 kink distorted central core of the JET tokamak”, poster presented at the 12th European Fusion Theory Conference, Madrid, 24 - 27 September 2007 (http://plasma2.ulb.ac.be/~eftc/Documents_EFTC12_191206SHORT_MADRID/index.html).

Peer Reviewed Publications

- A. Perona, L.-G. Eriksson, D. Grasso, “Electron response to collisionless magnetic reconnection”, *Phys. Plasmas* **17**, 042104 (2010).
- C. Perez von Thun, A. Perona *et al.*, “MeV-range fast ion losses induced by fishbones on JET”, paper under review by *Nuclear Fusion*.
- P. Helander, D. Grasso, R. J. Hastie, A. Perona, “Resistive stability of a plasma with runaway electrons”, *Physics of Plasmas* **14**, 122102 (2007).

Proceedings Publications

- A. Perona, L.-G. Eriksson, D. Grasso, “Generation of Suprathermal Electrons during Magnetic Reconnection”, proceedings of the 35th EPS, Hersonissos (Crete), 9 - 13 June 2008, ECA vol. **32D**, P-5.054 (2008).
- F. Porcelli, D. Grasso, A. Perona *et al.*, “Integrated Modelling of Sawtooth Oscillations in Tokamak Plasmas”, proceedings of the 21st IAEA Fusion Energy conference, 16 – 22 October 2006, Chengdu, China, **EX/7-4Ra** (May 2007).