

## Education

1999 **M. Sci. Physics**, *Università degli Studi di Padova*. Grade: **110/110 cum Laude**  
 2002 **PhD in Energetics**, *Università degli Studi di Padova*

## Employment

2003–2015 *Consiglio Nazionale delle Ricerche and Consorzio RFX*, Researcher  
 2015–2016 *Swiss Plasma Center, Ecole Polytechnique Federale de Lausanne*, Researcher  
 2016–Date *Consiglio Nazionale delle Ricerche and Consorzio RFX*, Researcher

## Research

I'm interested in fluctuations and turbulence in magnetized plasma experiments (mainly but not only fusion oriented ones). The main research subjects are summarized as follow, with reference to the more relevant publications:

- (a) Electromagnetic turbulence induced transport of particle and energy [A4, A1]
- (b) Statistical analysis of plasma turbulence in the framework of multifractal analysis [A2, A3, A11]
- (c) Investigation of non linear coherent structures, dubbed as *blobs* or *filaments* (drift-kinetic alfvén vortices, Edge Localized Modes, micro-tearing and current sheets during magnetic reconnection) [A6, A9, A8, A7]
- (d) Sheared flow generation and turbulent generated plasma flow [A5]
- (e) 3D magnetic field effect on kinetic properties of the plasma [A10]
- (f) Beam plasma interaction and turbulent transport of energetic ions

I've authored a total number of **101 Articles** in peer reviewed journal, **87 Conference proceedings** and personally presented **18 oral contributions**. The complete list of publications is available on request. Scientific Coordinator of different experiments in European Tokamaks (JET, AUG, TCV) in the framework of EUROfusion work program.

h-index factor: **21** according to ISI Web of Knowledge (last update March 9, 2016).

## Relevant publications

- [A1] V. Antoni, E. Martines, D. Desideri, L. Fattorini, G. Serianni, M. Spolaore, L. Tramontin, and N. Vianello *Plasma Physics and Controlled Fusion* **42**, 83–90, (2000).
- [A2] V. Antoni, V. Carbone, R. Cavazzana, G. Regnoli, N. Vianello, E. Spada, L. Fattorini, E. Martines, G. Serianni, M. Spolaore, L. Tramontin, and P. Veltri *Phys. Rev. Lett.* **87**, 045001, (2001).
- [A3] V. Carbone, R. Cavazzana, V. Antoni, L. Sorriso-Valvo, E. Spada, G. Regnoli, P. Giuliani, N. Vianello, F. Lepreti, R. Bruno, E. Martines, and P. Veltri *Europhys Lett* **58**, 349–355, (2002).
- [A4] M. Spolaore, V. Antoni, E. Spada, H. Bergsäter, R. Cavazzana, J. Drake, E. Martines, G. Regnoli, G. Serianni, and N. Vianello *Phys. Rev. Lett.* **93**, 215003, (2004).
- [A5] N. Vianello, E. Spada, V. Antoni, M. Spolaore, G. Serianni, G. Regnoli, R. Cavazzana, H. Bergsäter, and J. R. Drake *Phys. Rev. Lett.* **94**, 135001, (2005).
- [A6] N. Vianello, M. Spolaore, E. Martines, R. Cavazzana, G. Serianni, M. Zuin, E. Spada, and V. Antoni *Nuclear Fusion* **50**, 042002, (2010).
- [A7] I. Furno, M. Spolaore, C. Theiler, N. Vianello, R. Cavazzana, and A. Fasoli *Physical Review Letters* **106**, 245001, (June 2011).
- [A8] N. Vianello, V. Naulin, R. Schrittwieser, H. W. Müller, M. Zuin, C. Ionita, J. J. Rasmussen, F. Mehlmann, V. Rohde, R. Cavazzana, and M. Maraschek *Physical Review Letters* **106**, 125002, (2011).
- [A9] M. Spolaore, N. Vianello, I. Furno, D. Carralero, M. Agostini, J. A. Alonso, F. Avino, R. Cavazzana, G. De Masi, A. Fasoli, C. Hidalgo, E. Martines, B. Momo, A. Scaggion, P. Scarin, S. Spagnolo, G. Spizzo, C. Theiler, and M. Zuin *Physics of Plasmas* **22**, 012310, (Jan. 2015).
- [A10] N. Vianello, C. Rea, M. Agostini, R. Cavazzana, G. Ciaccio, G. De Masi, E. Martines, A. Mazzi, B. Momo, G. Spizzo, P. Scarin, M. Spolaore, P. Zanca, M. Zuin, L. Carraro, P. Innocente, L. Marrelli, M. E. Puiatti, and D. Terranova *Plasma Physics and Controlled Fusion* **57**, 014027, (Jan. 2015).
- [A11] N. Vianello, M. Spolaore, M. Agostini, R. Cavazzana, G. De Masi, E. Martines, B. Momo, P. Scarin, S. Spagnolo, and M. Zuin *Plasma Physics and Controlled Fusion* **58**, 044009, (Apr. 2016).