

Personal information

Name	Nicola Vianello
Date and Place of birth	14 August 1975, Venice, Italy
Citizenship	Italian
Address	Via dei Giacinti 28, 35126 Padova, Italy
Work Address	Consorzio RFX C.so Stati Uniti 4, 35127 Padova, Italy
ORCID ID	0000-003-4401-5346
ResearcherID	B-6323-2008
Google Scholar	Google scholar

Education

1993	High School Leaving Certificate , Liceo Scientifico Statale <i>U.Morin</i> , Venice Italy. Grade: 56/60
1999	M. Sci. Physics , <i>Università degli Studi di Padova</i> . Grade: 110/110 cum Laude
Thesis Title	<i>Trasporto di particelle ed energia per effetto di turbolenza elettrostatica in plasmi confinati in configurazione Reversed Field Pinch (Particle and energy transport induced by electrostatic turbulence in Reversed Field Pinch plasmas)</i>
advisor	Prof. S. Lo Russo, Dr. V. Antoni
2002	PhD in Energetics , <i>Università degli Studi di Padova</i>
Thesis Title	<i>Self-organization phenomena and coherent structure generation</i>
advisor	Prof. A.Buffa, Dr. V. Antoni

Schools

2000	<i>International School of Plasma Physics and Ultrafast Optics</i> , Capri, Italy
2001	<i>5th Carolus Magnus Euro-Summer School on Plasma and Fusion Energy Physics</i> , Badhonnef, Germany
2002	<i>International School on Topics in Nonlinear Dynamics</i> , Venice, Italy
2011	<i>5th International Iter Summer School: MHD and Energetic Particles</i> , Aix-en-Provence, France

Employment

1999	Consorzio RFX, Padova, Italy, Research Fellow
2002–2003	Consorzio RFX, Padova, Italy, Research Fellow
2003–2009	Consorzio RFX, Padova, Italy, Research Scientist
2009–2015	Consiglio Nazionale delle Ricerche, Research permanent staff
2015–2016	Swiss Plasma Center, Ecole Polytechnique Federale de Lausanne, Scientist
2016–	Consiglio Nazionale delle Ricerche and Consorzio RFX, Research permanent staff

Experience

March – June 2001	Visiting scientist at Royal Institute of Technology, Stockholm, Sweden
May – June 2002	Visiting scientist at Royal Institute of Technology, Stockholm, Sweden
March – April 2003	Visiting scientist at Royal Institute of Technology, Stockholm, Sweden
April – June 2004	Visiting scientist at Royal Institute of Technology, Stockholm, Sweden
October 2005	Visiting scientist at Risö National Laboratory, Denmark
February 2008	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
May 2009	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
November 2009	Visiting Scientist at Centre der Recherches en Physique des Plasmas, EPFL, Lausanne
March 2011	Visiting scientist at Royal Institute of Technology, Stockholm, Sweden
April 2011	Visiting scientist at the National Fusion Laboratory, CIEMAT, Madrid
May 2011	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
February-March 2012	Visiting Scientist at Culham Centre for Fusion Energy, Oxford, JET
July-September 2013	Visiting Scientist at Culham Centre for Fusion Energy, Oxford, JET
May 2014	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
July 2014	Visiting Scientist at Culham Centre for Fusion Energy, Oxford, JET
July 2015	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
July 2015	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
October 2015	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
February 2016	Visiting Scientist at Max-Planck Institut für Plasmaphysik, Garching, Germany
May 2016	Visiting Scientist at Swiss Plasma Centre, EPFL, Lausanne
July 2016	Visiting Scientist at Swiss Plasma Centre, EPFL, Lausanne
April 2017	Visiting scientist (fellowship), within EUROfusion framework, at Max-Planck Institut für Plasmaphysik, Garching, Germanoa
May 2017	Visiting scientist (fellowship), within EUROfusion framework, at Max-Planck Institut für Plasmaphysik, Garching, Germanoa
June 2017	Visiting scientist (fellowship), within EUROfusion framework, at Swiss Plasma Centre, EPFL, Lausanne
September 2017	Visiting scientist (fellowship), within EUROfusion framework, at the Swiss Plasma Centre, EPFL, Lausanne
November 2017	Visiting scientist (fellowship), within EUROfusion framework, at the Swiss Plasma Centre, EPFL, Lausanne
July 2018	Visiting scientist (fellowship), within EUROfusion framework, at Culham Centre for Fusion Energy, Oxford, UK
2019-date	Several visits to different European Laboratories, mainly Swiss Plasma Center at EPFL, Culham Centre for Fusion Energy at Culham, UK and Max-Planck Institut für Plasmaphysik, Garching all within EUROfusion framework scheme

Invited Lectures

July 2012	Invited lecture at the <i>Workshop on Electric Field, Turbulence Self Organization in Magnetized Plasmas</i> , Stockholm, Sweden
Title	<i>The role of 3D fields on edge and SOL turbulence</i>
July 2012	Invited lecture at the <i>41st EPS Conference in Plasma Physics</i> , Berlin, Germany
Title	<i>Magnetic perturbation as a viable tool for edge turbulence modification</i>
December 2014	Invited lecture at the <i>1st International and Interdisciplinary Workshop on Fusion and Technological Plasmas (FUSTECH)</i> , Collaborative Research Center SFB-TR87, Ruhr-University Bochum
Title	<i>Fluctuations in tokamaks and RFPs: Relation with topology</i>

Competition and Habilitation

May 2009	Public selection (Ref.364/12) held by Consiglio Nazionale delle Ricerche, for research position
Advisor Committee	Prof. A. Fasoli, Ecole Polytechnique Federale de Lausanne, Switzerland Dr. V. Antoni, Consiglio Nazionale delle Ricerche, Istituto Gas Ionizzati, Padova Dr. D. Farina, Consiglio Nazionale delle Ricerche, Istituto di Fisica del Plasma, Milano
Result	The competition included written exams and oral colloquium. The candidate resulted the winner of the competition with a final mark of 104.5/120
2012	Abilitazione Scientifica Nazionale (ASN National Scientific Habilitation). Public evaluation of the competences and scientific achievements to obtain the qualification of <i>Professore Associato</i> (Associate Professor) in Experimental Physics and Material Science
Evaluation Panel	Prof. Mattera Lorenzo, Università degli Studi di Genova, Italy Prof. Rinaldo Cubeddu, Politecnico di Milano, Italy Prof. Stefano Nannarone, Università degli Studi di Modena e Reggio Emilia, Italy Prof. Mobilio Settimio, Università degli Studi di Roma Tre, Italy Prof. Andrea Cavalleri, Max Planck Institute for the Structure and Dynamics of Matter, Hamburg
Grade	Excellent
2018	Abilitazione Scientifica Nazionale (ASN National Scientific Habilitation). Public evaluation of the competences and scientific achievements to obtain the qualification of <i>Professore Ordinario</i> (Full Professor) in Experimental Physics and Material Science
Evaluation Panel	Prof. Federico Boscherini, Università degli Studi di Bologna Prof. Giulio Nicola Cerullo, Politecnico di Milano Prof.ssa Pasqualino Maria Maddalena, Università degli Studi di Napoli Prof. Francesco Saverio Pavone, Università degli Studi di Firenze Prof. Sandro Santucci, Università degli Studi dell'Aquila Valid from 26/07/2018 to 26/07/2024
2018	Abilitazione Scientifica Nazionale (ASN National Scientific Habilitation). Public evaluation of the competences and scientific achievements to obtain the qualification of <i>Professore Associato</i> (Associate Professor) in Experimental Physics and Material Science
Evaluation Panel	Prof. Federico Boscherini, Università degli Studi di Bologna Prof. Giulio Nicola Cerullo, Politecnico di Milano Prof. Pasqualino Maria Maddalena, Università degli Studi di Napoli Prof. Francesco Saverio Pavone, Università degli Studi di Firenze Prof. Sandro Santucci, Università degli Studi dell'Aquila Valid from 26/07/2018 to 26/07/2024
2018	Abilitazione Scientifica Nazionale (ASN National Scientific Habilitation). Public evaluation of the competences and scientific achievements to obtain the qualification of <i>Professore Associato</i> (Associate Professor) in Theoretical Physics of Matter
Evaluation Panel	Prof. Federico Boscherini, Università degli Studi di Bologna Prof.ssa Vincenza Cupri, Università degli Studi di Messina Prof. Amos Maritan, Università degli Studi di Padova Prof. Alessandro Tredicucci, Università degli Studi di Pisa Prof. Pierluigi Veltri, Università della Calabria Abilitazione valida dal 08/08/2018 al 08/08/2024

Duties and Responsibilities

2007–2015	Responsible Scientist for edge manipulators in RFX-mod device. Responsibilities implies the maintenance and improvement of the two manipulators used in RFX-mod for the insertion of edge probes and the development of new probe heads with the coordination between design, mechanical and diagnostic technicians.
-----------	--

- 2015-2016 Responsible Scientist Soft X ray diagnostic in the TCV tokamak. Deputy Responsible Scientist for the Neutral Beam Heating system in the TCV tokamak.
- 2009 Task force leader in RFX-mod experiment for task force *Particle, Momentum and energy transport*. The task force was in charge to implement experimental proposals aimed to the comprehension of physical mechanisms which regulate particle momentum and energy transport in RFX-mod. The task force leaders together with the Scientific Coordinators take part to the decision processes concerning the experimental program of the machine, deciding priorities and objectives
- 2010 Task force leader in RFX-mod experiment for task force *Physics integration for high performance RFP*. The task force aimed to coordinate all the efforts devoted to the comprehension of the physical mechanism behind the appearance of improved confinement regimes in RFX-mod, to establish the physical requirement for a controlled achievement of h-mode confinement regime and to explore all the still open basic physics issues whose knowledge could help to improve plasma performances. As in the previous year the task force leaders take part to the scientific program schedule, coordinating in particular the activities for the high current performance operations.
- 2011 Coordinator of the EFDA working group *3D field effects in edge and SOL and diagnostic development* under EFDA Transport Topical Group. This working group has been established to coordinate the effort promoted by different EFDA associations on the following subject:
1. Investigation on the effect of non-axisymmetric fields on the filamentary structures (L and H-mode regimes)
 2. Investigation into changes in edge transport due to the application of 3D fields
 3. Characterization of the edge turbulence in these 3D situations (including effect of ion temperature and 3D fast particle losses)
 4. Edge turbulence and transport modelling by incorporating 3D field effects into the codes.
 5. Comparison studies between tokamaks, stellarators and RFPs on the above topics.
- The coordinators promote exchange of results between different association and the definition of common objectives which facilitate the comparison between different devices.
- 2012 Member of the Program committee of the 17th Joint EU-US Transport Task Force Meeting in combination with the 4th EFDA Transport Topical Group meeting, 3-6 September 2012, Padova, Italy
- 2013 Scientific Coordinator of experiment *B13-19 Investigation of M-Mode* on JET Tokamak campaigns C31-C34. Coordination implies assigning activities to the experimental team, plan the possible experimental campaign to be designed in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities.
- 2014 Scientific Coordinator of experiment *AUG14-2.2-3, SOL filamentary transport at high density*, under the MST1 Eurofusion Work-Packages. Coordination implies assigning activities to the international experimental team, plan the possible experimental campaign to be designed in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities.
- 2015-2016 Scientific Coordinator of experiment *TCV15-2.2-3: Filamentary Transport in the SOL* under MST1 Eurofusion Work-Package. Coordination implies assigning activities to the international experimental team, plan the possible experimental campaign to be designed in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities.
- 2015-2016 Scientific Coordinator of experiment *TCV15-1.5-1, Mitigation of high Z impurity accumulation through combined central ECRH and tailoring of MHD activity in high performance H-modes* under MST1 Eurofusion Work-Package. Coordination implies assigning activities to the international experimental team, plan the possible experimental campaign to be designed in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities.

- 2017-2018 Scientific Coordinator of Topic 21 *Filamentary transport in high-power H-mode conditions and in no/small-ELM regimes to predict heat and particle loads on PFCs for future devices* under MST1 Eurofusion Work-Package. Coordination implies assigning activities to the international experimental team, plan the experimental campaigns in three European Tokamak Devices (Asdex-Upgrade (Germany), TCV (Switzerland), MAST-U (UK)) in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities.
- 2018-2019 Scientific Coordinator of JET Task T18-02 *Scrape-off layer and SOL - pedestal interaction* under JET1 Eurofusion Work-Package. Coordination implies assigning activities to the international experimental team, plan data analysis campaign and interface with Scientific Coordinators of different experiments.
- 2019-2020 Scientific Coordinator of JET Experiment M18-41 *Divertor geometry effect on detachment and SOL* under JET1 Eurofusion Work-Package. Coordination implies assigning activities to the international experimental team, plan the experimental campaigns in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities
- 2019-2020 Scientific Coordinator of Topic 16 *Effect of filamentary transport on heat and particle loads* under MST1 Eurofusion Work-Package. Coordination implies assigning activities to the international experimental team, plan the experimental campaigns in three European Tokamak Devices (Asdex-Upgrade (Germany), TCV (Switzerland), MAST-U (UK)) in collaboration with Session leaders, establish scientific objectives and monitoring scientific activities.
- 2020- Member of the ITPA Pedestal & Edge Physics Topical Group
- 2020- Responsible of ITPA Div-SOL task D34 to coordinate activity on *Far Scrape Off Layer transport* in a world-wide coordinated effort

Teaching

- 2008–2009 Assistant for the course *Fluid and Plasma Physics*, Department of Physics, University of Padova
- 2010 Assistant for the course *Fluid and Plasma Physics*, Department of Physics, University of Padova
- 2011–2012 Assistant to the course *Fundamental of Plasma Physics*, Department of Physics, University of Padova
- 2012-2013 Assistant to the course *Fundamental of Plasma Physics*, Department of Physics, University of Padova
- 2013-2014 Assistant to the course *Fundamental of Plasma Physics*, Department of Physics, University of Padova
- 2013-2014 Lecturer for basic Physics course of the Joint Research Doctorate and European Interuniversity Doctoral Network on Fusion Science and Engineering
- 2014-2015 Assistant to the course *Fundamental of Plasma Physics*, Department of Physics, University of Padova

Supervising

- 2007 Supervisor for Bachelor Thesis, Department of Physics, University of Padova, candidate: A. Scaggion
- 2009 Supervisor for M.Sci. Thesis, Department of Physics, University of Padova, candidate: A. Scaggion
- 2011 Supervisor for Bachelor Thesis, Department of Physics, University of Padova, candidate: A. Mazzi
- 2013 Supervisor for M.Sci. Thesis, Department of Physics, University of Padova, candidate: A. Mazzi
- 2015 Supervisor for PhD. Thesis, Department of Physics, University of Padova, candidate: C. Rea

- 2009 Supervisor for M.Sci. Thesis, Ecole Polytechnique Federale de Lausanne, candidate: M. Pedro
- 2020 Supervisor for M.Sci. Thesis, Department of Physics, University of Padova, candidate: S. Bresciani

PhD Committee

- 2014 PhD Committee at the Department of Physics, Technical University of Denmark. Candidate: N. Yan
- 2015 PhD Committee at the Faculté de Sciences de Base, Ecole Polytechnique Federale de Lausanne. Candidate: F. Avino
- 2016 PhD Committee at the Faculté de Sciences de Base, Ecole Polytechnique Federale de Lausanne. Candidate: F. Nespoli
- 2017 PhD Committee at the Department of Physics, University of York. Candidate: A. Wynn
- 2018 PhD Committee presso la Faculté de Sciences de Base, Ecole Polytechnique Federale de Lausanne. Candidato: P. Paruta
- 2018 PhD Committee presso il Department of Physics, Technical University of Denmark. Candidato: J. M. B. Olsen

IT skills

Operating systems	Linux, Unix, Mac OSX, Windows, Open VMS
Programming	IDL (Interactive Data Language), Python/NumPy/SciPy, GIT Version Control, Bash, Matlab
Office	Microsoft Office, iWork, L ^A T _E X, web, emails
Design	Adobe InDesign, Adobe Illustrator

Technical Skills and Interest

Areas	Data analysis and Interpretation including advanced statistical tools for turbulent signals
Technicals	Competences in electrostatic and magnetic plasma diagnostic, competences in UHV technology, competences MDSplus technology for data acquisition

Research Interest

I've been involved in fusion plasma science since my M.Sci. thesis in Physics in 1999. During these 21 years I've tried to expand as much as possible my personal research skills focusing in particular on collection, analysis, interpretation and modeling of experimental data collected in fusion oriented experiments (Reversed Field Pinches, Tokamaks and Stellarators), with particular emphasis on the comparison with theoretical and numerical results. Main research subjects may be summarized as follow:

(a) Electromagnetic turbulence induced transport: with emphasis on anomalous transport studies induced by different source of turbulence: electrostatic as Drift-induced or interchange induced transport, or electromagnetic including the role of magnetic flutter fluxes in the mechanism of particle and energy losses

(b) Statistical analysis of plasma turbulence: the topic allowed me to get confident with advanced statistical tool (as Wavelet Transforms, Local Intermittency Measurements, Waiting Time distribution) and with dynamical system model as Self-Organized Criticality (SOC) systems, shell-models

(c) Blobs and ELM filaments: non linear coherent structures arising as a non-linear evolution of plasma instabilities have been experimentally investigated. The research includes studies on the generation and evolution of these structures including their parallel dynamics with emphasis on turbulent *blobs* and ELM *filaments*

(d) Sheared flow generation: Non linear interaction between turbulence and sheared flows including experimental investigation of the role of Maxwell and Reynolds stress in the momentum generation of edge flow

(e) Magnetic topology and its relation with plasma flow: with emphasis on the effect of non-axisymmetric magnetic field perturbation on kinetic properties of the plasma, as plasma flow, ambipolar electric field and Plasma Wall Interaction

(f) Beam plasma interaction: with emphasis on Alfvén instabilities, Energetic Particle Driven instabilities, and turbulent transport of energetic ions

Among the results the following should be highlighted:

- i First experimental proof of non applicability of *Self Organized Criticality* paradigm to edge plasma turbulence [A8, A3]
- ii First experimental evidence of non-linear generation of edge flow in Reversed Field Pinches through Reynolds stress mechanism [A29, A28]
- iii First experimental measurements of parallel current associated to coherent structures in a fusion relevant plasma [A53]
- iv First experimental evidence of the existence of a particular class of coherent structure, named *Drift-Kinetic Alfvén vortices*, arising because of the non linear coupling of Drift and Kinetic Alfvén waves in a laboratory plasma [A62]. This type of structure has been previously detected in the magnetosphere
- v First experimental estimate of parallel current associated to Edge Localized Modes filament [A75]
- vi First experimental measurements of 2D current distribution associated to plasma blobs [A64]
- vii Experimental evidence of transition towards helical states in high current Reversed Field Pinch operation [A45] and its consequence on edge ambipolarity [A92]
- viii Experimental investigation on the role of *blobs* in the formation of the so-called *shoulder* in density gradient in high density regime [A93]

In all my carrier I've always tried to conjugate a strong experimental insight on the data collection, participating in all the experimental activities mandatory in order to obtain useful experimental results, and a rigorous theoretical approach in the data analysis and interpretation, using theories and numerical tools as a framework to understand real plasma signals. This approach helped me to build a bridge between theories and experiments, a necessary effort in order to understand complex plasma dynamics.

Referees

Name	Prof. Volker Naulin
Institute	Department of Physics, DTU Technical University of Denmark Fysikvej Building 309, room 250 2800 Kgs. Lyngby, Denmark
email	vona@fysik.dtu.dk
Name	Prof. Ambrogio Fasoli
Institute	Swiss Plasma Center, Ecole Polytechnique Federal de Lausanne EPFL SB SPC-TCV PPB 318 Station 13 CH-1015 Lausanne Switzerland
email	ambrogio.fasoli@epfl.ch
Name	Prof. James Robert Drake
Institute	Department of Fusion Plasma Physics, School of Electrical Engineering, Royal Institute of Technology Teknikringen 31, SE 100 44, Stockholm, Sweden
email	drake@kth.se
Name	Prof. Francesco Gnesotto
Institute	Dipartimento di Ingegneria Industriale, Università degli Studi di Padova e Consorzio RFX Corso Stati Uniti 4, 35127 Padova, Italy
email	francesco.gnesotto@igi.cnr.it
Name	Prof. Vincenzo Carbone
Institute	Dipartimento di Fisica, Università degli Studi della Calabria Via P. Bucci Arcavacata di Rende (CS), Italy
email	vincenzo.carbone@fis.unical.it
Name	Prof. John S Sarff
Institute	Department of Physics, University of Wisconsin, Madison 1150 University Avenue Madison, WI 53706-1390
email	jssarff@wisc.edu

Name Dr. Dominique Escande
Institute Aix-Marseille Université, CNRS, PIIM, UMR 7345
campus Saint-Jerome, FR-13013 Marseille, France
email escande@ymail.com


Other

I'm regular referee for Physical Review Letters, Plasma Physics and Controlled Fusion, Nuclear Fusion.

Declaration

I hereby declare that the above information are true and correct to the best of my knowledge and belief and in the event of any information being found false or incorrect, my candidature will be liable to be canceled.

Padova, April 21, 2020



(Nicola Vianello)

Publications

I have authored a total number of 133 Articles in peer reviewed journal, 92 conference proceedings and personally presented 18 oral contributions.

h-index factor: 28 according to ISI Web of Knowledge (last update April 21, 2020) or 36 according to Google scholar (last update April 21, 2020)

Article in peer-review journal

- [A1] Antoni, V., Cavazzana, R., Fattorini, L., Martines, E., Serianni, G., Spolaore, M., Tramontin, L., and **Vianello, N.** (2000) "*Effects of pulsed poloidal current drive on the edge region of a reversed field pinch plasma*", *Plasma Physics and Controlled Fusion* **42**, 893–904.
- [A2] Antoni, V., Martines, E., Desideri, D., Fattorini, L., Serianni, G., Spolaore, M., Tramontin, L., and **Vianello, N.** (2000) "*Electrostatic transport reduction induced by flow shear modification in a reversed field pinch plasma*", *Plasma Physics and Controlled Fusion* **42**, 83–90.
- [A3] Antoni, V., Carbone, V., Cavazzana, R., Regnoli, G., **Vianello, N.**, Spada, E., Fattorini, L., Martines, E., Serianni, G., Spolaore, M., Tramontin, L., and Veltri, P. (2001) "*Transport processes in reversed-field-pinch plasmas: Inconsistency with the self-organized-criticality paradigm*", *Physical Review Letters* **87**, 045001.
- [A4] Antoni, V., Carbone, V., Martines, E., Regnoli, G., Serianni, G., **Vianello, N.**, and Veltri, P. (2001) "*Electrostatic turbulence intermittency and MHD relaxation phenomena in a RFP plasma*", *Europhys Lett* **54**, 51–57.
- [A5] Antoni, V., Valisa, M., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Bartiromo, R., Bettini, P., Boboc, A., Bolzonella, T., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Chitarin, G., Costa, S., D'Angelo, F., Bello, S. D., Lorenzi, A. D., Desideri, D., Escande, D. F., Fattorini, L., Fiorentin, P., Franz, P., Gaio, E., Garzotti, L., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Intravaia, A., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marrelli, L., Martin, P., Martines, E., Martini, S., Maschio, A., Masiello, A., Milani, F., Moresco, M., Murari, A., Nielsen, P., O'Gorman, M., Ortolani, S., Paccagnella, R., Pasqualotto, R., Pegourie, B., Peruzzo, S., Piovan, R., Pomaro, N., Ponno, A., Preti, G., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Spizzo, G., Spolaore, M., Taliervo, C., Telesca, G., Terranova, D., Toigo, V., Tramontin, L., **Vianello, N.**, Viterbo, M., Zabeo, L., Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., and Zollino, G. (2001) "*Transport mechanisms and enhanced confinement studies in RFX*", *Nucl. Fusion* **41**, 431–436.
- [A6] Martines, E., Spolaore, M., Antoni, V., Regnoli, G., **Vianello, N.**, Cavazzana, R., Serianni, G., and Tramontin, L. (2001) "*E x B velocity shear and intermittent structures in RFX*", *Czechoslovak Journal Of Physics* **51**, 983–993.

- [A7] Serianni, G., Antoni, V., Bergs aker, H., Brunzell, P. R., Drake, J., Spolaore, M., Satherblom, H., and **Vianello, N.** (2001) “*Electrostatic fluxes and plasma rotation in the edge region of EXTRAP-T2R*”, *Czechoslovak Journal Of Physics* **51**, 1119–1127.
- [A8] Spada, E., Carbone, V., Cavazzana, R., Fattorini, L., Regnoli, G., **Vianello, N.**, Antoni, V., Martines, E., Serianni, G., Spolaore, M., and Tramontin, L. (2001) “*Search of self-organized criticality processes in magnetically confined plasmas: Hints from the reversed field pinch configuration*”, *Physical Review Letters* **86**, 3032–3035.
- [A9] Spolaore, M., Antoni, V., Bagatin, M., Desideri, D., Fattorini, L., Martines, E., Serianni, G., Tramontin, L., and **Vianello, N.** (2001) “*Study of edge plasma properties comparing operation in hydrogen and helium in RFX*”, *Journal of Nuclear Materials* **290-293**, 729–732.
- [A10] Carbone, V., Cavazzana, R., Antoni, V., Sorriso-Valvo, L., Spada, E., Regnoli, G., Giuliani, P., **Vianello, N.**, Lepreti, F., Bruno, R., Martines, E., and Veltri, P. (2002) “*To what extent can dynamical models describe statistical features of turbulent flows?*”, *Europhys Lett* **58**, 349–355.
- [A11] Martin, P., Martini, S., Antoni, V., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Bartiromo, R., Bettini, P., Boboc, A., Bolzonella, T., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Chitarin, G., Costa, S., D’Angelo, F., Bello, S. D., Lorenzi, A. D., Desideri, D., Escande, D. F., Fattorini, L., Fiorentin, P., Franz, P., Gaio, E., Garzotti, L., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Intravaia, A., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marrelli, L., Martines, E., Maschio, A., Masiello, A., Milani, F., Moresco, M., Murari, A., Nielsen, P., O’Gorman, M., Ortolani, S., Paccagnella, R., Pasqualotto, R., Pegourie, B., Peruzzo, S., Piovan, R., Pomaro, N., Ponno, A., Preti, G., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Spizzo, G., Spolaore, M., Taliercio, C., Telesca, G., Terranova, D., Toigo, V., Tramontin, L., Valisa, M., **Vianello, N.**, Viterbo, M., Zabeo, L., Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., and Zollino, G. (2002) “*New insights into MHD dynamics of magnetically confined plasmas from experiments in RFX*”, *Nucl. Fusion* **42**, 247–257.
- [A12] Martines, E., Antoni, V., Cavazzana, R., Regnoli, G., Serianni, G., Spolaore, M., **Vianello, N.**, Hron, M., and Stockel, J. (2002) “*Coherent structures in the plasma edge turbulence of the RFX and CASTOR experiments*”, *Czechoslovak Journal Of Physics* **52**, 13–24.
- [A13] Spolaore, M., Antoni, V., Cavazzana, R., Regnoli, G., Serianni, G., Spada, E., **Vianello, N.**, Bergs aker, H., and Drake, J. (2002) “*Effects of ExB velocity shear on electrostatic structures*”, *Phys. Plasmas* **9**, 4110–4113.
- [A14] Tramontin, L., Garzotti, L., Antoni, V., Carraro, L., Desideri, D., Innocente, P., Martines, E., Serianni, G., Spolaore, M., and **Vianello, N.** (2002) “*Particle balance during edge biasing experiments in the reversed field pinch RFX*”, *Plasma Physics and Controlled Fusion* **44**, 195–204.
- [A15] **Vianello, N.**, Spolaore, M., Serianni, G., Bergs aker, H., Antoni, V., and Drake, J. (2002) “*Properties of the edge plasma in the rebuilt Extrap-T2R reversed field pinch experiment*”, *Plasma Physics and Controlled Fusion* **44**, 2513–2523.
- [A16] Antoni, V., Bagatin, M., Serianni, G., **Vianello, N.**, Zuin, M., Paganucci, F., Rossetti, P., and Andrenucci, M. (2003) “*Plasma Fluctuations in an Applied Field MPD Thruster*”, *AIP Conf. Proc.* **669**, 302–305.
- [A17] Antoni, V., Bergs aker, H., Serianni, G., Spolaore, M., **Vianello, N.**, Cavazzana, R., Regnoli, G., Spada, E., Martines, E., Bagatin, M., and Drake, J. (2003) “*Anomalous particle transport and flow shear in the edge region of RFPs*”, *Journal of Nuclear Materials* **313-316 IS -**, 972–975.
- [A18] Antoni, V., Regnoli, G., Spolaore, M., Serianni, G., **Vianello, N.**, Cavazzana, R., Spada, E., and Martines, E. (2003) “*Transport Due to Intermittent Events and Plasma Flow Shear in Magnetized Plasmas*”, *AIP Conf. Proc.* **669**, 191–194.
- [A19] Puiatti, M., Cappello, S., Lorenzini, R., Martini, S., Ortolani, S., Paccagnella, R., Sattin, F., Terranova, D., Bolzonella, T., Buffa, A., Canton, A., Carraro, L., Escande, D. F., Garzotti, L., Innocente, P., Marrelli, L., Martines, E., Scarin, P., Spizzo, G., Valisa, M., Zanca, P., Antoni, V., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Bettella, D., Bettini, P., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., D’Angelo, F., Bello, S. D., Lorenzi, A. D., Desideri, D., Fiorentin, P., Franz, P., Frassinetti, L., Gaio, E., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Martin, P., Masiello, A., Milani, F., Moresco, M., Murari, A., Nielsen, P., Pasqualotto, R., Pegourie, B., Peruzzo, S., Piovan, R., Piovesan, P., Pomaro, N., Preti, G., Regnoli, G., Rostagni, G., Serianni, G., Sonato, P., Spada, E., Spolaore, M., Taliercio, C., Telesca, G., Toigo, V., **Vianello, N.**, Zaccaria, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2003) “*Analysis and modelling of the magnetic and plasma profiles during PPCD experiments in RFX*”, *Nucl. Fusion* **43**, 1057–1065.
- [A20] Antoni, V., Bergs aker, H., Cavazzana, R., Carbone, V., Drake, J., Martines, E., Regnoli, G., Serianni, G., Spada, E., Spolaore, M., and **Vianello, N.** (2004) “*Turbulence and Anomalous Transport in Magnetized Plasmas: Hints from the Reversed Field Pinch Configuration*”, *Contrib. Plasma Phys.* **44**, 458–464.

- [A21] Sattin, F., **Vianello, N.**, and Valisa, M. (2004) “On the probability distribution function of particle density at the edge of fusion devices”, *Phys. Plasmas* **11**, 5032.
- [A22] Spolaore, M., Antoni, V., Spada, E., Bergs aker, H., Cavazzana, R., Drake, J., Martines, E., Regnoli, G., Serianni, G., and **Vianello, N.** (2004) “Vortex-induced diffusivity in reversed field pinch plasmas”, *Physical Review Letters* **93**, 215003.
- [A23] Antoni, V., Spada, E., **Vianello, N.**, Spolaore, M., Cavazzana, R., Serianni, G., and Martines, E. (2005) “Shear flows generated by plasma turbulence and their influence on transport”, *Plasma Physics and Controlled Fusion* **47**, B13–B23.
- [A24] Regnoli, G., Bergs aker, H., Tennfors, E., Zonca, F., Martines, E., Serianni, G., Spolaore, M., **Vianello, N.**, Cecconello, M., Antoni, V., Cavazzana, R., and Malmberg, J.-A. (2005) “Observations of toroidicity-induced Alfv en eigenmodes in a reversed field pinch plasma”, *Phys. Plasmas* **12**, 042502.
- [A25] Sattin, F. and **Vianello, N.** (2005) “Statistical model for intermittent plasma edge turbulence”, *Phys. Rev. E* **72**, 5.
- [A26] Sattin, F., **Vianello, N.**, Valisa, M., Antoni, V., and Serianni, G. (2005) “On the probability distribution function of particle density and flux at the edge of fusion devices”, *J. Phys.: Conf. Ser.* **7**, 247–252.
- [A27] Spolaore, M., Antoni, V., Spada, E., Bergs aker, H., Cavazzana, R., Drake, J. R., Martines, E., Regnoli, G., Serianni, G., and **Vianello, N.** (2005) “Coherent structure diffusivity in the edge region of Reversed Field Pinch experiments”, *J. Phys.: Conf. Ser.* **7**, 253–258.
- [A28] **Vianello, N.**, Antoni, V., Spada, E., Spolaore, M., Serianni, G., Cavazzana, R., Bergs aker, H., Cecconello, M., and Drake, J. (2005) “Reynolds and Maxwell stress measurements in the reversed field pinch experiment Extrap-T2R”, *Nucl. Fusion* **45**, 761–766.
- [A29] **Vianello, N.**, Spada, E., Antoni, V., Spolaore, M., Serianni, G., Regnoli, G., Cavazzana, R., Bergs aker, H., and Drake, J. R. (2005) “Self-Regulation of ExB Flow Shear via Plasma Turbulence”, *Physical Review Letters* **94**, 135001.
- [A30] Antoni, V., Drake, J., Spada, E., Spolaore, M., **Vianello, N.**, Bergs aker, H., Cavazzana, R., Cecconello, M., Martines, E., and Serianni, G. (2006) “Coherent structures and anomalous transport in reversed field pinch plasmas”, *Phys. Scr.* **T122**, 1–7.
- [A31] Paccagnella, R., Ortolani, S., Zanca, P., Alfier, A., Bolzonella, T., Marrelli, L., Puiatti, M. E., Serianni, G., Terranova, D., Valisa, M., Agostini, M., Apolloni, L., Auriemma, F., Bonomo, F., Canton, A., Carraro, L., Cavazzana, R., Cavinato, M., Franz, P., Gazza, E., Grando, L., Innocente, P., Lorenzini, R., Luchetta, A., Manduchi, G., Marchiori, G., Martini, S., Pasqualotto, R., Piovesan, P., Pomaro, N., Scarin, P., Spizzo, G., Spolaore, M., Taliercio, C., **Vianello, N.**, Zaniol, B., Zanotto, L., and Zuin, M. (2006) “Active-Feedback Control of the Magnetic Boundary for Magnetohydrodynamic Stabilization of a Fusion Plasma”, *Physical Review Letters* **97**, 4.
- [A32] Sattin, F., Scarin, P., Agostini, M., Cavazzana, R., Serianni, G., Spolaore, M., and **Vianello, N.** (2006) “Statistical features of edge turbulence in RFX-mod from gas puffing imaging”, *Plasma Physics and Controlled Fusion* **48**, 1033–1051.
- [A33] **Vianello, N.**, Antoni, V., Spada, E., Spolaore, M., Serianni, G., Cavazzana, R., Bergs aker, H., Cecconello, M., and Drake, J. R. (2006) “Turbulence, flow and transport: hints from reversed field pinch”, *Plasma Physics and Controlled Fusion* **48**, S193–S203.
- [A34] Cavazzana, R., Serianni, G., Scarin, P., Agostini, M., **Vianello, N.**, Yagi, Y., Koguchi, H., Kiyama, S., Sakakita, H., and Hirano, Y. (2007) “Investigation of plasma edge turbulence using a gas-puff imaging system in the reversed-field pinch device TPE-RX”, *Plasma Physics and Controlled Fusion* **49**, 129–143.
- [A35] Marrelli, L., Zanca, P., Valisa, M., Marchiori, G., Alfier, A., Bonomo, F., Gobbin, M., Piovesan, P., Terranova, D., Agostini, M., Alessi, C., Antoni, V., Apolloni, L., Auriemma, F., Barana, O., Bettini, P., Bolzonella, T., Bonfiglio, D., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chitarin, G., Bello, S. D., Lorenzi, A. D., Escande, D. F., Fassina, A., Franz, P., Gadani, G., Gaio, E., Gazza, E., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marcuzzi, D., Martin, P., Martini, S., Martines, E., Masiello, A., Milani, F., Moresco, M., Murari, A., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovani, R., Pizzimenti, A., Pomaro, N., Predebon, I., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spizzo, G., Spolaore, M., Taccon, C., Taliercio, C., Toigo, V., **Vianello, N.**, Zaccaria, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2007) “Magnetic self organization, MHD active control and confinement in RFX-mod”, *Plasma Physics and Controlled Fusion* **49**, B359–B369.

- [A36] Martini, S., Agostini, M., Alessi, C., Alfier, A., Antoni, V., Apolloni, L., Auriemma, F., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., Bello, S. D., Lorenzi, A. D., Pasqual, L. D., Escande, D. F., Fassina, A., Franz, P., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S., Innocente, P., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martinez, E., Masiello, A., Milani, F., Moresco, M., Murari, A., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovan, R., Piovesan, P., Pizzimenti, A., Pomaro, N., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spizzo, G., Spolaore, M., Taccon, C., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2007) “Active MHD control at high currents in RFX-mod”, *Nucl. Fusion* **47**, 783–791.
- [A37] Scarin, P., Agostini, M., Cavazzana, R., Sattin, F., Serianni, G., and **Vianello, N.** (2007) “Edge turbulence in RFX-mod virtual-shell discharges”, *Journal of Nuclear Materials* **363-365**, 669.
- [A38] Serianni, G., Agostini, M., Antoni, V., Cavazzana, R., Martinez, E., Sattin, F., Scarin, P., Spada, E., Spolaore, M., **Vianello, N.**, and Zuin, M. (2007) “Coherent structures and transport properties in magnetized plasmas”, *Plasma Physics and Controlled Fusion* **49**, B267–B280.
- [A39] Valisa, M., Bolzonella, T., Buratti, P., Carraro, L., Cavazzana, R., Bello, S. D., Martin, P., Pasqualotto, R., Sarff, J., Spolaore, M., Zanca, P., Zanotto, L., Agostini, M., Alfier, A., Antoni, V., Apolloni, L., Auriemma, F., Barana, O., Baruzzo, M., Bettini, P., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Cavinato, M., Chitarin, G., Lorenzi, A. D., Masi, G. D., Escande, D. F., Fassina, A., Franz, P., Gaio, E., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guazzotto, L., Guo, S., Igochine, V., Innocente, P., Lorenzini, R., Luchetta, A., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martini, S., Martinez, E., Mccollam, K., Milani, F., Moresco, M., Novello, L., Ortolani, S., Paccagnella, R., Peruzzo, S., Piovan, R., Piron, L., Pizzimenti, A., Piovesan, P., Pomaro, N., Predebon, I., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spizzo, G., Taliercio, C., Terranova, D., Toigo, V., **Vianello, N.**, Yadihin, D., Zaccaria, P., Zaniol, B., Zilli, E., and Zuin, M. (2008) “High current regimes in RFX-mod”, *Plasma Physics and Controlled Fusion* **50**, 124031.
- [A40] Agostini, M., Scarin, P., Cavazzana, R., Sattin, F., Serianni, G., Spolaore, M., and **Vianello, N.** (2009) “Edge turbulence characterization in RFX-mod with optical diagnostics”, *Plasma Physics and Controlled Fusion* **51**, 105003.
- [A41] Brotankova, J., Adamek, J., Martinez, E., Stockel, J., Spolaore, M., Cavazzana, R., Serianni, G., **Vianello, N.**, and Zuin, M. (2009) “Measurements of plasma potential and electron temperature by ball-pen probes in RFX-Mod”, *Probl. At. Sci. Tech.*, 16–18.
- [A42] Ionita, C., **Vianello, N.**, Muller, H. W., Mehlmann, F., Zuin, M., Naulin, V., Rasmussen, J., Rohde, V., Cavazzana, R., Lupu, C., Maraschek, M., Schrittwieser, R. W., and Balan, P. C. (2009) “Simultaneous Measurements of Electrostatic and Magnetic Fluctuations in ASDEX Upgrade Edge Plasma”, *J. Plasma Fusion Res. Series* **8**, 413.
- [A43] Lepreti, F., Carbone, V., Spolaore, M., Antoni, V., Cavazzana, R., Martinez, E., Serianni, G., Veltri, P., **Vianello, N.**, and Zuin, M. (2009) “Yaglom law for electrostatic turbulence”, *Europhys Lett* **86**, 25001.
- [A44] Lorenzini, R., Agostini, M., Alfier, A., Antoni, V., Apolloni, L., Auriemma, F., Barana, O., Baruzzo, M., Bettini, P., Bonfiglio, D., Bolzonella, T., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Chitarin, G., Bello, S., Lorenzi, A. D., Masi, G. D., Escande, D., Fassina, A., Franz, P., Gaio, E., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S., Innocente, P., Luchetta, A., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martini, S., Martinez, E., Milani, F., Moresco, M., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovan, R., Piovesan, P., Piron, L., Pizzimenti, A., Pomaro, N., Predebon, I., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spizzo, G., Spolaore, M., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., Veltri, P., **Vianello, N.**, Zaccaria, P., Zaniol, B., Zanotto, L., Zilli, E., and Zuin, M. (2009) “Improvement of the magnetic configuration in the reversed field pinch through successive bifurcations”, *Phys. Plasmas* **16**, 056109–6.
- [A45] Lorenzini, R., Martinez, E., Piovesan, P., Terranova, D., Zanca, P., Zuin, M., Alfier, A., Bonfiglio, D., Bonomo, F., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Escande, D., Fassina, A., Franz, P., Gobbin, M., Innocente, P., Marrelli, L., Pasqualotto, R., Puiatti, M., Spolaore, M., Valisa, M., **Vianello, N.**, and Martin, P. (2009) “Self-organized helical equilibria as a new paradigm for ohmically heated fusion plasmas”, *Nat Phys* **5**, 570–754.

- [A46] Martin, P., Apolloni, L., Puiatti, M., Adamek, J., Agostini, M., Alfier, A., Annibaldi, S., Antoni, V., Auriemma, F., Barana, O., Baruzzo, M., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Brotankova, J., Buffa, A., Buratti, P., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chapman, B., Chitarin, G., Bello, S. D., Lorenzi, A. D., Masi, G. D., Escande, D., Fassina, A., Ferro, A., Franz, P., Gaio, E., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guazzotto, L., Guo, S., Igochine, V., Innocente, P., Liu, Y., Lorenzini, R., Luchetta, A., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martini, S., Martines, E., Mccollam, K., Menmuir, S., Milani, F., Moresco, M., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovan, R., Piovesan, P., Piron, L., Pizzimenti, A., Pomaro, N., Predebon, I., Reusch, J., Rostagni, G., Rubinacci, G., Sarff, J., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spolaore, M., Spizzo, G., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Villone, F., White, R. B., Yadikin, D., Zaccaria, P., Zamengo, A., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zohm, H., and Zuin, M. (2009) “Overview of RFX-mod results”, *Nucl. Fusion* **49**, 104019.
- [A47] Martines, E., **Vianello, N.**, Sundkvist, D., Spolaore, M., Zuin, M., Agostini, M., Antoni, V., Cavazzana, R., Ionita, C., Maraschek, M., Mehlmann, F., Müller, H., Naulin, V., Rasmussen, J., Rohde, V., Scarin, P., Schrittwieser, R., Serianni, G., and Spada, E. (2009) “Current filaments in turbulent magnetized plasmas”, *Plasma Physics and Controlled Fusion* **51**, 124053.
- [A48] Piovesan, P., Zuin, M., Alfier, A., Bonfiglio, D., Bonomo, F., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Escande, D., Fassina, A., Gobbin, M., Lorenzini, R., Marrelli, L., Martin, P., Martines, E., Pasqualotto, R., Puiatti, M., Spolaore, M., Valisa, M., **Vianello, N.**, and Zanca, P. (2009) “Magnetic order and confinement improvement in high-current regimes of RFX-mod with MHD feedback control”, *Nucl. Fusion* **49**, 085036.
- [A49] Puiatti, M., Alfier, A., Auriemma, F., Cappello, S., Carraro, L., Cavazzana, R., Bello, S. D., Fassina, A., Escande, D., Franz, P., Gobbin, M., Innocente, P., Lorenzini, R., Marrelli, L., Martin, P., Piovesan, P., Predebon, I., Sattin, F., Spizzo, G., Terranova, D., Valisa, M., Zaniol, B., Zanotto, L., Zuin, M., Agostini, M., Antoni, V., Apolloni, L., Baruzzo, M., Bolzonella, T., Bonfiglio, D., Bonomo, F., Boozer, A., Brombin, M., Canton, A., Delogu, R., Masi, G. D., Gaio, E., Gazza, E., Giudicotti, L., Grando, L., Guo, S., Manduchi, G., Marchiori, G., Martines, E., Martini, S., Menmuir, S., Momo, B., Moresco, M., Munaretto, S., Novello, L., Paccagnella, R., Pasqualotto, R., Piovan, R., Piron, L., Pizzimenti, A., Pomphrey, N., Scarin, P., Serianni, G., Spada, E., Soppelsa, A., Spagnolo, S., Spolaore, M., Taliercio, C., **Vianello, N.**, Zamengo, A., and Zanca, P. (2009) “Helical equilibria and magnetic structures in the reversed field pinch and analogies to the tokamak and stellarator”, *Plasma Physics and Controlled Fusion* **51**, 124031.
- [A50] Sattin, F., Agostini, M., Cavazzana, R., Serianni, G., Scarin, P., and **Vianello, N.** (2009) “About the parabolic relation existing between the skewness and the kurtosis in time series of experimental data”, *Phys. Scr.* **79**, 045006.
- [A51] Sattin, F., Agostini, M., Scarin, P., **Vianello, N.**, Cavazzana, R., Marrelli, L., Serianni, G., Zweben, S. J., Maqueda, R., Yagi, Y., Sakakita, H., Koguchi, H., Kiyama, S., Hirano, Y., and Terry, J. (2009) “On the statistics of edge fluctuations: comparative study between various fusion devices”, *Plasma Physics and Controlled Fusion* **51**, 055013.
- [A52] Scarin, P., Agostini, M., Cavazzana, R., Sattin, F., Serianni, G., Spolaore, M., and **Vianello, N.** (2009) “Edge turbulence scaling in RFX-mod as measured using GPI diagnostic”, *Journal of Nuclear Materials* **390-391**, 444–447.
- [A53] Spolaore, M., **Vianello, N.**, Agostini, M., Cavazzana, R., Martines, E., Scarin, P., Serianni, G., Spada, E., Zuin, M., and Antoni, V. (2009) “Direct Measurement of Current Filament Structures in a Magnetic-Confinement Fusion Device”, *Physical Review Letters* **102**, 165001.
- [A54] Spolaore, M., **Vianello, N.**, Agostini, M., Cavazzana, R., Martines, E., Serianni, G., Scarin, P., Spada, E., Zuin, M., and Antoni, V. (2009) “Magnetic and electrostatic structures measured in the edge region of the RFX-mod experiment”, *Journal of Nuclear Materials* **390-391**, 448–451.
- [A55] **Vianello, N.**, Martines, E., Agostini, M., Alfier, A., Canton, A., Cavazzana, R., Masi, G. D., Fassina, A., Lorenzini, R., Scarin, P., Serianni, G., Spagnolo, S., Spizzo, G., Spolaore, M., and Zuin, M. (2009) “Transport mechanisms in the outer region of RFX-mod”, *Nucl. Fusion* **49**, 045008.
- [A56] Zuin, M., **Vianello, N.**, Spolaore, M., Antoni, V., Bolzonella, T., Cavazzana, R., Martines, E., Serianni, G., and Terranova, D. (2009) “Current sheets during spontaneous reconnection in a current-carrying fusion plasma”, *Plasma Physics and Controlled Fusion* **51**, 035012.
- [A57] Masi, G. D., Spolaore, M., Cavazzana, R., Innocente, P., Lorenzini, R., Martines, E., Momo, B., Munaretto, S., Serianni, G., Spagnolo, S., Terranova, D., **Vianello, N.**, and Zuin, M. (2010) “Flow Measurements in the Edge Region of the RFX-Mod Experiment”, *Contrib. Plasma Phys.* **50**, 824–829.

- [A58] Menmuir, S., Carraro, L., Alfier, A., Bonomo, F., Fassina, A., Spizzo, G., and **Vianello, N.** (2010) “Impurity transport studies in RFX-mod multiple helicity and enhanced confinement QSH regimes”, *Plasma Physics and Controlled Fusion* **52**, 095001.
- [A59] Schrittwieser, R., Ionita, C., **Vianello, N.**, Müller, H., Mehlmann, F., Zuin, M., Naulin, V., Rasmussen, J., Rohde, V., Cavazzana, R., Lupu, C., Maraschek, M., and Maszl, C. (2010) “A Probe Head for Simultaneous Measurements of Electrostatic and Magnetic Fluctuations in ASDEX Upgrade Edge Plasma”, *Contrib. Plasma Phys.* **50**, 860–865.
- [A60] Spizzo, G., Scarin, P., Agostini, M., Alfier, A., Auriemma, F., Bonfiglio, D., Cappello, S., Fassina, A., Franz, P., Piron, L., Piovesan, P., Puiatti, M., Valisa, M., and **Vianello, N.** (2010) “Investigation on the relation between edge radial electric field asymmetries in RFX-mod and density limit”, *Plasma Physics and Controlled Fusion* **52**, 095011.
- [A61] Terranova, D., Bonfiglio, D., Boozer, A., Cooper, A., Gobbin, M., Hirshman, S., Lorenzini, R., Marrelli, L., Martines, E., Momo, B., Pomphrey, N., Predebon, I., Sanchez, R., Spizzo, G., Agostini, M., Alfier, A., Apolloni, L., Auriemma, F., Baruzzo, M., Bolzonella, T., Bonomo, F., Brombin, M., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Bello, S., Delogu, R., Masi, G. D., Drevlak, M., Fassina, A., Ferro, A., Franz, P., Gaio, E., Gazza, E., Giudicotti, L., Grando, L., Guo, S., Innocente, P., López-Bruna, D., Manduchi, G., Marchiori, G., Martin, P., Martini, S., Menmuir, S., Munaretto, S., Novello, L., Paccagnella, R., Pasqualotto, R., Pereverzev, G., Piovan, R., Piovesan, P., Piron, L., Puiatti, M., Recchia, M., Sattin, F., Scarin, P., Serianni, G., Soppelsa, A., Spagnolo, S., Spolaore, M., Taliercio, C., Valisa, M., **Vianello, N.**, Wang, Z., Zamengo, A., Zaniol, B., Zanutto, L., Zanca, P., and Zuin, M. (2010) “A 3D approach to equilibrium, stability and transport studies in RFX-mod improved regimes”, *Plasma Physics and Controlled Fusion* **52**, 124023.
- [A62] **Vianello, N.**, Spolaore, M., Martines, E., Cavazzana, R., Serianni, G., Zuin, M., Spada, E., and Antoni, V. (2010) “Drift-Alfvén vortex structures in the edge region of a fusion relevant plasma”, *Nuclear Fusion* **50**, 042002.
- [A63] Zuin, M., Spagnolo, S., Paccagnella, R., Martines, E., Cavazzana, R., Serianni, G., Spolaore, M., and **Vianello, N.** (2010) “Resistive g -modes in a reversed-field pinch plasma”, *Nuclear Fusion* **50**, 052001.
- [A64] Furno, I., Spolaore, M., Theiler, C., **Vianello, N.**, Cavazzana, R., and Fasoli, A. (June 2011) “Direct Two-Dimensional Measurements of the Field-Aligned Current Associated with Plasma Blobs”, *Physical Review Letters* **106**, 245001.
- [A65] Furno, I., Theiler, C., Lancon, D., Fasoli, A., Iraj, D., Ricci, P., Spolaore, M., and **Vianello, N.** (2011) “Blob current structures in TORPEX plasmas: experimental measurements and numerical simulations”, *Plasma Physics and Controlled Fusion* **53**, 124016.
- [A66] Kallenbach, A., Adamek, J., Aho-Mantila, L., Äkäslompolo, S., Angioni, C., Atanasiu, C. V., Balden, M., Behler, K., Belonohy, E., Bergmann, A., Bernert, M., Bilato, R., Bobkov, V., Boom, J., Bottino, A., Braun, F., Brüdgam, M., Buhler, A., Burckhart, A., Chankin, A., Classen, I. G. J., Conway, G. D., Coster, D. P., de Marné, P., D’Inca, R., Drube, R., Dux, R., Eich, T., Endstrasser, N., Engelhardt, K., Esposito, B., Fable, E., Fährbach, H. U., Fattorini, L., Fischer, R., Flaws, A., Fünfsgelder, H., Fuchs, J. C., Gál, K., Munoz, M. G., Geiger, B., Adamov, M. G., Giannone, L., Giroud, C., Görler, T., Da Graça, S., Greuner, H., Gruber, O., Gude, A., Günter, S., Haas, G., Hakola, A. H., Hangan, D., Happel, T., Hauff, T., Heinemann, B., Herrmann, A., Hicks, N., Hobirk, J., Höhnle, H., Hölzl, M., Hopf, C., Horton, L., Huat, M., Igochine, V., Ionita, C., Janzer, A., Jenko, F., Käsemann, C. P., Kalvin, S., Kardaun, O., Kaufmann, M., Kirk, A., Klingshirn, H. J., Kocan, M., Kocsis, G., Kollotzek, H., Konz, C., Koslowski, R., Krieger, K., Kurki-Suonio, T., Kurzan, B., Lackner, K., Lang, P. T., Lauber, P., Laux, M., Leipold, F., Leuterer, F., Lohs, A., Luhmann Jr, N. C., Lunt, T., Lyssoivan, A., Maier, H., Maggi, C., Mank, K., Manso, M. E., Maraschek, M., Martin, P., Mayer, M., McCarthy, P. J., Mcdermott, R., Meister, H., Menchero, L., Meo, F., Merkel, P., Merkel, R., Mertens, V., Merz, F., Mlynek, A., Monaco, F., Muller, H. W., München, M., Murmann, H., Neu, G., Neu, R., Nold, B., Noterdaeme, J.-M., Park, H. K., Pautasso, G., Pereverzev, G., Podoba, Y., Pompon, F., Poli, E., Polochiy, K., Potzel, S., Prechtel, M., Püschel, M. J., Pütterich, T., Rathgeber, S. K., Raupp, G., Reich, M., Reiter, B., Ribeiro, T., Riedl, R., Rohde, V., Roth, J., Rott, M., Ryter, F., Sandmann, W., Santos, J., Sassenberg, K., Sauter, P., Scarabosio, A., Schall, G., Schmid, K., Schneider, P. A., Schneider, W., Schramm, G., Schrittwieser, R., Schweinzer, J., Scott, B., Sempf, M., Serra, F., Sertoli, M., Siccino, M., Sigalov, A., Silva, A., Sips, A. C. C., Sommer, F., Stäbler, A., Stober, J., Streibl, B., Strumberger, E., Sugiyama, K., Suttrop, W., Szepesi, T., Tardini, G., Tichmann, C., Told, D., Treutterer, W., Urso, L., Varela, P., Vincente, J., **Vianello, N.**, Vierle, T., Viezzer, E., Vorpahl, C., Wagner, D., Weller, A., Wenninger, R., Wieland, B., Wigger, C., Willensdorfer, M., Wischmeier, M., Wolfrum, E., Würsching, E., Yadikin, D., Yu, Q., Zammuto, I., Zsche, D., Zehetbauer, T., Zhang, Y., Zilker, M., and Zohm, H. (2011) “Overview of ASDEX Upgrade results”, *Nuclear Fusion* **51**, 094012.

- [A67] Martin, P., Adamek, J., Agostinetti, P., Agostini, M., Alfier, A., Angioni, C., Antoni, V., Apolloni, L., Auriemma, F., Barana, O., Barison, S., Baruzzo, M., Bettini, P., Boldrin, M., Bolzonella, T., Bonfiglio, D., Bonomo, F., Boozer, A. H., Brombin, M., Brotankova, J., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chacon, L., Chitarin, G., Cooper, W. A., Bello, S. D., Palma, M. D., Delogu, R., de Lorenzi, A., de Masi, G., Dong, J. Q., Drevlak, M., Escande, D. F., Fantini, F., Fassina, A., Fellin, F., Ferro, A., Fiameni, S., Fiorentin, A., Franz, P., Gaio, E., Garbet, X., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S. C., Hirano, Y., Hirshman, S. P., Ide, S., Igochine, V., In, Y., Innocente, P., Kiyama, S., Liu, S. F., Liu, Y. Q., Bruna, D. L., Lorenzini, R., Luchetta, A., Manduchi, G., Mansfield, D. K., Marchiori, G., Marcuzzi, D., Marrelli, L., Martini, S., Matsunaga, G., Martinez, E., Mazzitelli, G., Mccollam, K., Menmuir, S., Milani, F., Momo, B., Moresco, M., Munaretto, S., Novello, L., Okabayashi, M., Ortolani, S., Paccagnella, R., Pasqualotto, R., Pavei, M., Perverez, G. V., Peruzzo, S., Piovan, R., Piovesan, P., Piron, L., Pizzimenti, A., Pomaro, N., Pomphrey, N., Predebon, I., Puiatti, M. E., Rigato, V., Rizzolo, A., Rostagni, G., Rubinacci, G., Ruzzon, A., Sakakita, H., Sánchez, R., Sarff, J. S., Sattin, F., Scaggion, A., Scarin, P., Schneider, W., Seriani, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spolaore, M., Spong, D. A., Spizzo, G., Takechi, M., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., Veranda, M., **Vianello, N.**, Villone, F., Wang, Z., White, R. B., Yadikin, D., Zaccaria, P., Zamengo, A., Zanca, P., Zaniol, B., Zanutto, L., Zilli, E., Zollino, G., and Zuin, M. (2011) "Overview of the RFX fusion science program", *Nuclear Fusion* **51**, 094023.
- [A68] Muller, H. W., Adamek, J., Cavazzana, R., Conway, G. D., Fuchs, C., Gunn, J. P., Herrmann, A., Horacek, J., Ionita, C., Kallenbach, A., Kocan, M., Maraschek, M., Maszl, C., Mehlmann, F., Nold, B., Peterka, M., Rohde, V., Schweinzer, J., Schrittwieser, R., **Vianello, N.**, Wolfrum, E., Zuin, M., and the ASDEX Upgrade Team. (June 2011) "Latest investigations on fluctuations, ELM filaments and turbulent transport in the SOL of ASDEX Upgrade", *Nuclear Fusion* **51**, 073023.
- [A69] Naulin, V., **Vianello, N.**, Schrittwieser, R., Muller, H. W., Migliucci, P., Zuin, M., Ionita, C., Maszl, C., Mehlmann, F., Rasmussen, J. J., Rohde, V., Cavazzana, R., and Maraschek, M. (Aug. 2011) "Magnetic diagnostic of SOL-filaments generated by type I ELMs on JET and ASDEX Upgrade", *Journal of Nuclear Materials* **415**, S869–S872.
- [A70] Puiatti, M. E., Valisa, M., Agostini, M., Auriemma, F., Bonomo, F., Carraro, L., Fassina, A., Gobbin, M., Lorenzini, R., Momo, B., Scaggion, A., Zaniol, B., Alfier, A., Apolloni, L., Baruzzo, M., Bolzonella, T., Bonfiglio, D., Canton, A., Cappello, S., Cavazzana, R., Bello, S. D., de Masi, G., Escande, D. F., Franz, P., Gazza, E., Guo, S., Innocente, P., Marchiori, G., Marrelli, L., Martin, P., Martinez, E., Martini, S., Menmuir, S., Novello, L., Paccagnella, R., Piovesan, P., Piron, L., Predebon, I., Ruzzon, A., Sattin, F., Scarin, P., Soppelsa, A., Spizzo, G., Spagnolo, S., Spolaore, M., Terranova, D., Veranda, M., **Vianello, N.**, Zanca, P., Zanutto, L., and Zuin, M. (2011) "Internal and external electron transport barriers in the RFX-mod reversed field pinch", *Nuclear Fusion* **51**, 073038.
- [A71] Sattin, F., **Vianello, N.**, Lorenzini, R., Gobbin, M., and Bonomo, F. (2011) "Modelling the temperature plateau in RFX-mod single-helical-axis (SHAx) states", *Plasma Physics and Controlled Fusion* **53**, 025013.
- [A72] Scarin, P., **Vianello, N.**, Agostini, M., Spizzo, G., Spolaore, M., Zuin, M., Cappello, S., Carraro, L., Cavazzana, R., de Masi, G., Martinez, E., Moresco, M., Munaretto, S., Puiatti, M. E., and Valisa, M. (2011) "Topology and transport in the edge region of RFX-mod helical regimes", *Nuclear Fusion* **51**, 073002.
- [A73] Spagnolo, S., Zuin, M., Auriemma, F., Cavazzana, R., Martinez, E., Spolaore, M., and **Vianello, N.** (2011) "Alfvén eigenmodes in the RFX-mod reversed-field pinch plasma", *Nuclear Fusion* **51**, 083038.
- [A74] Spolaore, M., de Masi, G., **Vianello, N.**, Agostini, M., Bonfiglio, D., Cavazzana, R., Lorenzini, R., Martinez, E., Momo, B., Scarin, P., Seriani, G., Spagnolo, S., and Zuin, M. (2011) "Parallel and perpendicular flows in the RFX-mod edge region", *Journal of Nuclear Materials* **415**, S437–S442.
- [A75] **Vianello, N.**, Naulin, V., Schrittwieser, R., Muller, H. W., Zuin, M., Ionita, C., Rasmussen, J. J., Mehlmann, F., Rohde, V., Cavazzana, R., and Maraschek, M. (2011) "Direct Observation of Current in Type-I Edge-Localized-Mode Filaments on the ASDEX Upgrade Tokamak", *Physical Review Letters* **106**, 125002.
- [A76] Xu, Y., Carralero, D., Hidalgo, C., Jachmich, S., Manz, P., Martinez, E., van Milligen, B., Pedrosa, M. A., Ramisch, M., Shesterikov, I., Silva, C., Spolaore, M., Stroth, U., and **Vianello, N.** (2011) "Long-range correlations and edge transport bifurcation in fusion plasmas", *Nuclear Fusion* **51**, 063020.
- [A77] Agostini, M., Scaggion, A., Scarin, P., Spizzo, G., and **Vianello, N.** (2012) "Interplay between edge magnetic topology, pressure profile and blobs in the edge of RFX-mod", *Plasma Physics and Controlled Fusion* **54**, 065003.
- [A78] Spizzo, G., Agostini, M., Scarin, P., **Vianello, N.**, White, R. B., Cappello, S., Puiatti, M. E., Valisa, M., and the RFX-Mod Team. (2012) "Edge topology and flows in the reversed-field pinch", *Nuclear Fusion* **52**, 054015.
- [A79] De Masi, G., Martinez, E., Spolaore, M., **Vianello, N.**, Cavazzana, R., Innocente, P., Momo, B., Spagnolo, S., and Zuin, M. (2013) "Electrostatic properties and active magnetic topology modification in the RFX-mod edge plasma", *Nuclear Fusion* **53**, 083026.

- [A80] Fasoli, A., Avino, F., Bovet, A., Furno, I., Gustafson, K., Jolliet, S., Loizu, J., Malinverni, D., Ricci, P., Riva, F., Theiler, C., Spolaore, M., and **Vianello, N.** (2013) “*Basic investigations of electrostatic turbulence and its interaction with plasma and suprathermal ions in a simple magnetized toroidal plasma*”, *Nuclear Fusion* **53**, 063013.
- [A81] Martin, P., Puiatti, M. E., Agostinetti, P., Agostini, M., Alonso, J. A., Antoni, V., Apolloni, L., Auriemma, F., Avino, F., Barbalace, A., Barbisan, M., Barbui, T., Barison, S., Barp, M., Baruzzo, M., Bettini, P., Bigi, M., Bilel, R., Boldrin, M., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Bustreo, C., Canton, A., Cappello, S., Carralero, D., Carraro, L., Cavazzana, R., Chacon, L., Chapman, B., Chitarin, G., Ciaccio, G., Cooper, W. A., Dal Bello, S., Dalla Palma, M., Delogu, R., de Lorenzi, A., Delzanno, G. L., De Masi, G., De Muri, M., Dong, J. Q., Escande, D. F., Fantini, F., Fasoli, A., Fassina, A., Fellin, F., Ferro, A., Fiameni, S., Finn, J. M., Finotti, C., Fiorentin, A., Fonnesu, N., Framarin, J., Franz, P., Frassinetti, L., Furno, I., Furno Palumbo, M., Gaio, E., Gazza, E., Ghezzi, F., Giudicotti, L., Gnesotto, F., Gobbin, M., Gonzales, W. A., Grando, L., Guo, S. C., Hanson, J. D., Hidalgo, C., Hirano, Y., Hirshman, S. P., Ide, S., In, Y., Innocente, P., Jackson, G. L., Kiyama, S., Liu, S. F., Liu, Y. Q., López-Bruna, D., Lorenzini, R., Luce, T. C., Luchetta, A., Maistrello, A., Manduchi, G., Mansfield, D. K., Marchiori, G., Marconato, N., Marcuzzi, D., Marrelli, L., Martini, S., Matsunaga, G., Martinez, E., Mazzitelli, G., Mccollam, K., Momo, B., Moresco, M., Munaretto, S., Novello, L., Okabayashi, M., Olofsson, E., Paccagnella, R., Pasqualotto, R., Pavei, M., Peruzzo, S., Pesce, A., Pilan, N., Piovan, R., Piovesan, P., Piron, C., Piron, L., Pomaro, N., Predebon, I., Recchia, M., Rigato, V., Rizzolo, A., Roquemore, A. L., Rostagni, G., Ruzzon, A., Sakakita, H., Sánchez, R., Sarff, J. S., Sartori, E., Sattin, F., Scaggion, A., Scarin, P., Schneider, W., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spolaore, M., Spong, D. A., Spizzo, G., Takechi, M., Taliercio, C., Terranova, D., Theiler, C., Toigo, V., Trevisan, G. L., Valente, M., Valisa, M., Veltri, P., Veranda, M., **Vianello, N.**, Villone, F., Wang, Z. R., White, R. B., Xu, X. Y., Zaccaria, P., Zamengo, A., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (Sept. 2013) “*Overview of the RFX-mod fusion science programme*”, *Nuclear Fusion* **53**, 104018.
- [A82] Piovesan, P., Bonfiglio, D., Auriemma, F., Bonomo, F., Carraro, L., Cavazzana, R., De Masi, G., Fassina, A., Franz, P., Gobbin, M., Marrelli, L., Martin, P., Martinez, E., Momo, B., Piron, L., Valisa, M., Veranda, M., **Vianello, N.**, Zaniol, B., Agostini, M., Baruzzo, M., Bolzonella, T., Canton, A., Cappello, S., Chacon, L., Ciaccio, G., Escande, D. F., Innocente, P., Lorenzini, R., Paccagnella, R., Puiatti, M. E., Scarin, P., Soppelsa, A., Spizzo, G., Spolaore, M., Terranova, D., Zanca, P., Zanotto, L., and Zuin, M. (2013) “*RFX-mod: A multi-configuration fusion facility for three-dimensional physics studies*”, *Physics of Plasmas* **20**, 056112.
- [A83] Puiatti, M. E., Spizzo, G., Agostini, M., Auriemma, F., Bonfiglio, D., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Ciaccio, G., De Masi, G., Fassina, A., Franz, P., Gobbin, M., Guo, S. C., Innocente, P., Lorenzini, R., Marrelli, L., Martin, P., Piron, L., Paccagnella, R., Predebon, I., Scaggion, A., Scarin, P., Terranova, D., Valisa, M., **Vianello, N.**, Zaniol, B., Zuin, M., and Team, R.-M. (Dec. 2013) “*Interaction between magnetic boundary and first wall recycling in the reversed field pinch*”, *Plasma Physics and Controlled Fusion* **55**.
- [A84] Scarin, P., Agostini, M., Carraro, L., Scaggion, A., Spizzo, G., Spolaore, M., and **Vianello, N.** (2013) “*Boundary plasma physics in RFX-mod: Radial electric field and transport topology*”, *Journal of Nuclear Materials* **438**, S550–S553.
- [A85] **Vianello, N.**, Spizzo, G., Agostini, M., Scarin, P., Carraro, L., Cavazzana, R., De Masi, G., Martinez, E., Momo, B., Rea, C., Spagnolo, S., Spolaore, M., Zuin, M., and the RFX-Mod Team. (June 2013) “*3D effects on the RFX-mod boundary*”, *Nuclear Fusion* **53**, 073025.
- [A86] Zuin, M., Spagnolo, S., Predebon, I., Sattin, F., Auriemma, F., Cavazzana, R., Fassina, A., Martinez, E., Paccagnella, R., Spolaore, M., and **Vianello, N.** (2013) “*Experimental Observation of Microtearing Modes in a Toroidal Fusion Plasma*”, *Physical Review Letters* **110**, 055002.
- [A87] Agostini, M., Scarin, P., Spizzo, G., **Vianello, N.**, and Carraro, L. (Sept. 2014) “*Parallel and perpendicular structure of the edge turbulence in a three-dimensional magnetic field*”, *Plasma Physics and Controlled Fusion* **56**, 095016.
- [A88] Ciaccio, G., Schmitz, O., Abdullaev, S. S., Frerichs, H., Agostini, M., Scarin, P., Spizzo, G., **Vianello, N.**, and White, R. B. (June 2014) “*Plasma edge transport with magnetic islands—a comparison between tokamak and reversed-field pinch*”, *Nuclear Fusion* **54**, 064008.
- [A89] Martinez, E., Zuin, M., Cavazzana, R., Adamek, J., Antoni, V., Serianni, G., Spolaore, M., and **Vianello, N.** (Oct. 2014) “*Spatiotemporal synchronization of drift waves in a magnetron sputtering plasma*”, *Physics of Plasmas* **21**, 102309.
- [A90] Mehlmann, F., Costea, S., Schrittwieser, R., Naulin, V., Rasmussen, J. J., Müller, H. W., Nielsen, A. H., **Vianello, N.**, Carralero, D., Rohde, V., Lux, C., Ionita, C., and Team, A. U. g. (2014) “*Electric Probe Measurements of the Poloidal Velocity in the Scrape-Off Layer of ASDEX Upgrade*”, *Contributions to Plasma Physics* **54**, 273–278.

- [A91] Scarin, P., Agostini, M., Carraro, L., Cavazzana, R., Ciaccio, G., De Masi, G., Spizzo, G., Spolaore, M., and **Vianello, N.** (Oct. 2014) “Edge plasma physics modifications due to magnetic ripple in RFX-mod”, *Journal of Nuclear Materials*.
- [A92] Spizzo, G., **Vianello, N.**, White, R. B., Abdullaev, S. S., Agostini, M., Cavazzana, R., Ciaccio, G., Puiatti, M. E., Scarin, P., Schmitz, O., Spolaore, M., Terranova, D., RFX, and Teams, T. (Apr. 2014) “Edge ambipolar potential in toroidal fusion plasmas”, *Physics of Plasmas* **21**, 056102.
- [A93] Carralero, D., Manz, P., Aho-Mantila, L., Birkenmeier, G., Brix, M., Groth, M., Müller, H. W., Stroth, U., **Vianello, N.**, Wolfrum, E., ASDEX Upgrade Team, JET Contributors, and EUROfusion MST1 Team. (Nov. 2015) “Experimental Validation of a Filament Transport Model in Turbulent Magnetized Plasmas”, *Physical Review Letters* **115**, 215002.
- [A94] Müller, H. W., Bernert, M., Carralero, D., Kallenbach, A., Kurzan, B., Scarabosio, A., Sieglin, B., Tophøj, L., **Vianello, N.**, and Wolfrum, E. (Aug. 2015) “Far scrape-off layer particle and heat fluxes in high density – High power scenarios”, *Journal of Nuclear Materials* **463**, 739–743.
- [A95] Puiatti, M. E., Bello, S. D., Marrelli, L., Martin, P., Agostinetti, P., Agostini, M., Antoni, V., Auriemma, F., Barbisan, M., Barbui, T., Baruzzo, M., Battistella, M., Belli, F., Bettini, P., Bigi, M., Bilel, R., Boldrin, M., Bolzonella, T., Bonfiglio, D., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cester, D., Chacón, L., Chapman, B. E., Chitarin, G., Ciaccio, G., Cooper, W. A., Palma, M. D., Dambrosio, S., Delogu, R., De Lorenzi, A., De Masi, G., Dong, J. Q., Escande, D. F., Esposito, B., Fassina, A., Fellin, F., Ferro, A., Finotti, C., Franz, P., Frassinetti, L., Palumbo, M. F., Gaio, E., Ghezzi, F., Giudicotti, L., Gnesotto, F., Gobbin, M., Gonzales, W. A., Grando, L., Guo, S. C., Hanson, J. D., Hirshman, S. P., Innocente, P., Jackson, J. L., Kiyama, S., Komm, M., Laguardia, L., Li, C., Liu, S. F., Liu, Y. Q., Lorenzini, R., Luce, T. C., Luchetta, A., Maistrello, A., Manduchi, G., Mansfield, D. K., Marchiori, G., Marconato, N., Marocco, D., Marcuzzi, D., Martinez, E., Martini, S., Matsunaga, G., Mazzitelli, G., Miorin, E., Momo, B., Moresco, M., Okabayashi, M., Olofsson, E., Paccagnella, R., Patel, N., Pavei, M., Peruzzo, S., Pilan, N., Pigatto, L., Piovan, R., Piovesan, P., Piron, C., Piron, L., Predebon, I., Rea, C., Recchia, M., Rigato, V., Rizzolo, A., Roquemore, A. L., Rostagni, G., Ruset, C., Ruzzon, A., Sajo-Bohus, L., Sakakita, H., Sánchez, R., Sarff, J. S., Sartori, E., Sattin, F., Scaggion, A., Scarin, P., Schmitz, O., Sonato, P., Spada, E., Spagnolo, S., Spolaore, M., Spong, D. A., Spizzo, G., Stevanato, L., Takechi, M., Taliercio, C., Terranova, D., Trevisan, G. L., Urso, G., Valente, M., Valisa, M., Veranda, M., **Vianello, N.**, Viesti, G., Villone, F., Vincenzi, P., Visona, N., Wang, Z. R., White, R. B., Xanthopoulos, P., Xu, X. Y., Yanovskiy, V., Zamengo, A., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., and Zuin, M. (Oct. 2015) “Overview of the RFX-mod contribution to the international Fusion Science Program”, *Nuclear Fusion* **55**, 104012.
- [A96] Rea, C., **Vianello, N.**, Agostini, M., Cavazzana, R., De Masi, G., Martinez, E., Momo, B., Scarin, P., Spagnolo, S., Spizzo, G., Spolaore, M., and Zuin, M. (Sept. 2015) “Comparative studies of electrostatic turbulence induced transport in presence of resonant magnetic perturbations in RFX-mod”, *Nuclear Fusion* **55**, 113021.
- [A97] Spizzo, G., Pucella, G., Tudisco, O., Zuin, M., Agostini, M., Alessi, E., Auriemma, F., Bin, W., Buratti, P., Carraro, L., Cavazzana, R., Ciaccio, G., De Masi, G., Esposito, B., Galperti, C., Garavaglia, S., Granucci, G., Marinucci, M., Marrelli, L., Martinez, E., Mazzotta, C., Minelli, D., Moro, A., Puiatti, M. E., Scarin, P., Sozzi, C., Spolaore, M., Schmitz, O., **Vianello, N.**, and White, R. B. (Apr. 2015) “Density limit studies in the tokamak and the reversed-field pinch”, *Nuclear Fusion* **55**, 043007.
- [A98] Spolaore, M., Agostini, M., Momo, B., Rea, C., **Vianello, N.**, Zuin, M., Cavazzana, R., De Masi, G., Innocente, P., Marrelli, L., Martinez, E., Mazzi, A., Puiatti, M. E., Spagnolo, S., Spizzo, G., Scarin, P., Terranova, D., and Zanca, P. (June 2015) “Turbulent electromagnetic filaments in actively modulated toroidal plasma edge”, *Nuclear Fusion* **55**, 063041.
- [A99] Spolaore, M., **Vianello, N.**, Furno, I., Carralero, D., Agostini, M., Alonso, J. A., Avino, F., Cavazzana, R., De Masi, G., Fasoli, A., Hidalgo, C., Martinez, E., Momo, B., Scaggion, A., Scarin, P., Spagnolo, S., Spizzo, G., Theiler, C., and Zuin, M. (Jan. 2015) “Electromagnetic turbulent structures: A ubiquitous feature of the edge region of toroidal plasma configurations”, *Physics of Plasmas* **22**, 012310.
- [A100] **Vianello, N.**, Rea, C., Agostini, M., Cavazzana, R., Ciaccio, G., De Masi, G., Martinez, E., Mazzi, A., Momo, B., Spizzo, G., Scarin, P., Spolaore, M., Zanca, P., Zuin, M., Carraro, L., Innocente, P., Marrelli, L., Puiatti, M. E., and Terranova, D. (Jan. 2015) “Magnetic perturbations as a viable tool for edge turbulence modification”, *Plasma Physics and Controlled Fusion* **57**, 014027.
- [A101] **Vianello, N.**, Spolaore, M., Agostini, M., Cavazzana, R., De Masi, G., Martinez, E., Momo, B., Scarin, P., Spagnolo, S., and Zuin, M. (Apr. 2016) “On the statistics and features of turbulent structures in RFX-mod”, *Plasma Physics and Controlled Fusion* **58**, 044009.
- [A102] Agostini, M., Scarin, P., Spizzo, G., Auriemma, F., Cappello, S., Carraro, L., Marrelli, L., Spagnolo, S., Spolaore, M., Veranda, M., **Vianello, N.**, and Zuin, M. (July 2017) “Edge plasma properties with 3D magnetic perturbations in RFX-mod”, *Nuclear Fusion* **57**, 076033.

- [A103] Carralero, D., Madsen, J., Artene, S. A., Bernert, M., Birkenmeier, G., Eich, T., Fuchert, G., Laggner, F., Naulin, V., Manz, P., **Vianello, N.**, and Wolfrum, E. (2017) “A study on the density shoulder formation in the SOL of H-mode plasmas”, *Nuclear Materials and Energy* **12**, 1189–1193.
- [A104] Carralero, D., Siccinio, M., Komm, M., Artene, S. A., D’Isa, F. A., Adamek, J., Aho-Mantila, L., Birkenmeier, G., Brix, M., Fuchert, G., Groth, M., Lunt, T., Manz, P., Madsen, J., Marsen, S., Müller, H. W., Stroth, U., Sun, H. J., **Vianello, N.**, Wischmeier, M., Wolfrum, E., Team, A. U., Team, C., Contributors, J., and Team, T. E. M. (May 2017) “Recent progress towards a quantitative description of filamentary SOL transport”, *Nuclear Fusion* **57**, 056044.
- [A105] Coda, S., Ahn, J., Albanese, R., Alberti, S., Alessi, E., Allan, S., Anand, H., Anastassiou, G., Andr be, Y., Angioni, C., Ariola, M., Bernert, M., Beurskens, M., Bin, W., Blanchard, P., Blanken, T. C., Boedo, J. A., Bolzonella, T., Bouquey, F., Braunm ller, F. H., Bufferand, H., Buratti, P., Calabr , G., Camenen, Y., Carnevale, D., Carpanese, F., Causa, F., Cesario, R., Chapman, I. T., Chellai, O., Choi, D., Cianfarani, C., Ciraolo, G., Citrin, J., Costea, S., Crisanti, F., Cruz, N., Czarnecka, A., Decker, J., De Masi, G., De Tommasi, G., Douai, D., Dunne, M., Duval, B. P., Eich, T., Elmore, S., Esposito, B., Faitsch, M., Fasoli, A., Fedorczak, N., Felici, F., F v rier, O., Ficker, O., Fietz, S., Fontana, M., Frassinetti, L., Furno, I., Galeani, S., Gallo, A., Galperti, C., Garavaglia, S., Garrido, I., Geiger, B., Giovannozzi, E., Gobbin, M., Goodman, T. P., Gorini, G., Gospodarczyk, M., Granucci, G., Graves, J. P., Guirlet, R., Hakola, A., Ham, C., Harrison, J., Hawke, J., Hennequin, P., Hnat, B., Hogeweyj, D., Hogge, J. P., Honor, C., Hopf, C., Hor ek, J., Huang, Z., Igochine, V., Innocente, P., Ionita Schrittwieser, C., Isliker, H., Jacquier, R., Jardin, A., Kamleitner, J., Karpushov, A., Keeling, D. L., Kirneva, N., Kong, M., Koubiti, M., Kovacic, J., Kr mer-Flecken, A., Krawczyk, N., Kudlacek, O., Labit, B., Lazzaro, E., Le, H. B., Lipschultz, B., Llobet, X., Lomanowski, B., Loschiavo, V. P., Lunt, T., Maget, P., Maljaars, E., Malygin, A., Maraschek, M., Marini, C., Martin, P., Martin, Y., Mastrostefano, S., Maurizio, R., Mavridis, M., Mazon, D., McAdams, R., McDermott, R., Merle, A., Meyer, H., Militello, F., Miron, I. G., Molina Cabrera, P. A., Moret, J.-M., Moro, A., Moulton, D., Naulin, V., Nespoli, F., Nielsen, A. H., Nocente, M., Nouailletas, R., Nowak, S., Odstr il, T., Papp, G., Pap ok, R., Pau, A., Pautasso, G., Pericoli-Ridolfini, V., Piovesan, P., Piron, C., Pisokas, T., Porte, L., Preynas, M., Ramogida, G., Rapson, C., Juul Rasmussen, J., Reich, M., Reimerdes, H., Reux, C., Ricci, P., Rittich, D., Riva, F., Robinson, T., Saarelma, S., Saint-Laurent, F., Sauter, O., Scannell, R., Schlatter, C., Schneider, B., Schneider, P., Schrittwieser, R., Sciortino, F., Sertoli, M., Sheikh, U., Sieglin, B., Silva, M., Sinha, J., Sozzi, C., Spolaore, M., Stange, T., Stoltzfus-Dueck, T., Tamain, P., Teplukhina, A., Testa, D., Theiler, C., Thornton, A., Toph j, L., Tran, M. Q., Tsironis, C., Tsui, C., Uccello, A., Vartanian, S., Verdoolaege, G., Verhaegh, K., Vermare, L., **Vianello, N.**, Vijvers, W. A. J., Vlahos, L., Vu, N. M. T., Walkden, N., Wauters, T., Weisen, H., Wischmeier, M., Zestanakis, P., Zuin, M., and the EUROfusion MST1 Team. (Oct. 2017) “Overview of the TCV tokamak program: scientific progress and facility upgrades”, *Nuclear Fusion* **57**, 102011.
- [A106] Kazakov, Y. O., Ongena, J., Wright, J. C., Wukitch, S. J., Lerche, E., Mantsinen, M. J., Van Eester, D., Craciunescu, T., Kiptily, V. G., Lin, Y., Nocente, M., Nabais, F., Nave, M. F. F., Baranov, Y., Bielecki, J., Bilato, R., Bobkov, V., Crombe, K., Czarnecka, A., Faustin, J. M., Felton, R., Fitzgerald, M., Gallart, D., Giacomelli, L., Golfopoulos, T., Hubbard, A. E., Jacquet, P., Johnson, T., Lennholm, M., Loarer, T., Porkolab, M., Sharapov, S. E., Valcarcel, D., Van Schoor, M., Weisen, H., Team, t. A. C.-M., and Contributors, J. (Oct. 2017) “Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating”, *Nature Physics* **13**, 973–978.
- [A107] Kovarik, K., Duran, I., Stockel, J., Seidl, J., Adamek, J., Spolaore, M., **Vianello, N.**, Hacek, P., Hron, M., and Panek, R. (Mar. 2017) “Filamentary probe on the COMPASS tokamak”, *Review of Scientific Instruments*.
- [A108] Litaudon, X. et al. (Oct. 2017) “Overview of the JET results in support to ITER”, *Nuclear Fusion* **57**, 102001.
- [A109] Meyer, H. et al. (Oct. 2017) “Overview of progress in European medium sized tokamaks towards an integrated plasma-edge/wall solution*”, *Nuclear Fusion* **57**, 102014.
- [A110] Reimerdes, H., Alberti, S., Blanchard, P., Bruzzone, P., Chavan, R., Coda, S., Duval, B. P., Fasoli, A., Labit, B., Lipschultz, B., Lunt, T., Martin, Y., Moret, J.-M., Sheikh, U., Sudki, B., Testa, D., Theiler, C., Toussaint, M., Uglietti, D., **Vianello, N.**, and Wischmeier, M. (2017) “TCV divertor upgrade for alternative magnetic configurations”, *Nuclear Materials and Energy* **12**, 1106–1111.
- [A111] Reimerdes, H., Duval, B. P., Harrison, J. R., Labit, B., Lipschultz, B., Lunt, T., Theiler, C., Tsui, C. K., Verhaegh, K., Vijvers, W. A. J., Boedo, J. A., Calabr , G., Crisanti, F., Innocente, P., Maurizio, R., Pericoli, V., Sheikh, U., Spolaore, M., **Vianello, N.**, the TCV team, and the EUROfusion MST1 Team. (Sept. 2017) “TCV experiments towards the development of a plasma exhaust solution”, *Nuclear Fusion* **57**, 126007.
- [A112] Scarin, P., Agostini, M., Carraro, L., Spizzo, G., Spolaore, M., and **Vianello, N.** (2017) “Boundary plasma response in RFX-mod to 3D magnetic field perturbations”, *Nuclear Materials and Energy* **12**, 913–917.

- [A113] Solano, E. R., **Vianello, N.**, Delabie, E., Hillesheim, J. C., Buratti, P., Refy, D., Balboa, I., Boboc, A., Coelho, R., Sieglin, B., Silburn, S., Drewelow, P., Devaux, S., Dodt, D., Figueiredo, A., Frassinetti, L., Marsen, S., Meneses, L., Maggi, C. F., Morris, J., Gerasimov, S., Baruzzo, M., Stamp, M., Grist, D., Nunes, I., Rimini, F., Schmuck, S., Lupelli, I., Silva, C., and Contributors, J. (Feb. 2017) “*Axisymmetric oscillations at L–H transitions in JET: M-mode*”, *Nuclear Fusion* **57**, 022021.
- [A114] Spizzo, G., Agostini, M., Scarin, P., White, R. B., Schmitz, O., Spolaore, M., Terranova, D., Veranda, M., and **Vianello, N.** (Dec. 2017) “*Toroidal coupling in the kinetic response to edge magnetic perturbations*”, *Nuclear Fusion* **57**, 126055.
- [A115] Spolaore, M., Cavazzana, R., Marrelli, L., Carraro, L., Franz, P., Spagnolo, S., Zaniol, B., Zuin, M., Cordaro, L., Dal Bello, S., De Masi, G., Ferro, A., Finotti, C., Grando, L., Grenfell, G., Innocente, P., Kudlacek, O., Marchiori, G., Martines, E., Momo, B., Paccagnella, R., Piovesan, P., Piron, C., Puiatti, M. E., Recchia, M., Scarin, P., Taliercio, C., **Vianello, N.**, and Zanutto, L. (Nov. 2017) “*H-mode achievement and edge features in RFX-mod tokamak operation*”, *Nuclear Fusion* **57**, 116039.
- [A116] Spolaore, M., Kovarik, K., Stockel, J., Adamek, J., Dejarnac, R., Duran, I., Komm, M., Markovic, T., Martines, E., Panek, R., Seidl, J., and **Vianello, N.** (2017) “*Electromagnetic ELM and inter-ELM filaments detected in the COMPASS Scrape-Off Layer*”, *Nuclear Materials and Energy* **12**, 844–851.
- [A117] Theiler, C., Lipschultz, B., Harrison, J., Labit, B., Reimerdes, H., Tsui, C., Vijvers, W., Boedo, J., Duval, B., Elmore, S., Innocente, P., Kruezi, U., Lunt, T., Maurizio, R., Nespoli, F., Sheikh, U., Thornton, A., Van Limpt, S., Verhaegh, K., and **Vianello, N.** (2017) “*Results from recent detachment experiments in alternative divertor configurations on TCV*”, *Nuclear Fusion*.
- [A118] Verhaegh, K., Lipschultz, B., Duval, B. P., Harrison, J. R., Reimerdes, H., Theiler, C., Labit, B., Maurizio, R., Marini, C., Nespoli, F., Sheikh, U., Tsui, C. K., **Vianello, N.**, and Vijvers, W. A. J. (2017) “*Spectroscopic investigations of divertor detachment in TCV*”, *Nuclear Materials and Energy* **12**, 1112–1117.
- [A119] **Vianello, N.**, Tsui, C. K.-W. K.-W., Theiler, C., Allan, S., Boedo, J. A., Labit, B., Reimerdes, H., Verhaegh, K., Vijvers, W. A. J., Walkden, N., Costea, S., Kovačič, J., Ionita, C., Naulin, V., Nielsen, A., Rasmussen, J. J., Schneider, B. S., Schrittwieser, R., Spolaore, M., Carralero, D., Madsen, J., Lipschultz, B., and Militello, F. (Nov. 2017) “*Modification of SOL profiles and fluctuations with line-average density and divertor flux expansion in TCV*”, *Nuclear Fusion* **57**, 116014.
- [A120] Weinzettl, V., Adamek, J., Berta, M., Bilkova, P., Bogár, O., Böhm, P., Cavalier, J., Dejarnac, R., Dimitrova, M., Ficker, O., Fridrich, D., Grover, O., Hacek, P., Havlicek, J., Havránek, A., Horaček, J., Hron, M., Imrisek, M., Komm, M., Kovarik, K., Krbec, J., Markovic, T., Matveeva, E., Mitošinková, K., Mlynar, J., Naydenkova, D., Panek, R., Paprok, R., Peterka, M., Podolnik, A., Seidl, J., Sos, M., Stockel, J., Tomeš, M., Varavin, M., Varju, J., Vlaine, M., Vondracek, P., Zajac, J., Zacek, F., Stano, M., Anda, G., Dunai, D., Krizsanoczi, T., Refy, D., Zoletnik, S., Silva, A., Gomes, R., Pereira, T., Popov, T., Sarychev, D., Ermak, G. P., Zebrowski, J., Jakubowski, M., Rabinski, M., Malinowski, K., Nanobashvili, S., Spolaore, M., **Vianello, N.**, Gauthier, E., Gunn, J. P., and Devitre, A. (Dec. 2017) “*Progress in diagnostics of the COMPASS tokamak*”, *Journal of Instrumentation* **12**, C12015–C12015.
- [A121] Wolf, R. C., Beidler, C., Beurskens, M., Biedermann, C., Bosch, H.-S., Bozhnikov, S., Brakel, R., Dinklage, A., Feng, Y., Fuchert, G., Grulke, O., Hirsch, M., Höfel, U., Jakubowski, M., Knauer, J., Kocsis, G., König, R., Kornejew, P., Kraemer-Flecken, A., Langenberg, A., Laqua, H., Lazerson, S., Marsen, S., Marushchenko, N., Moseev, D., Pablant, N., Pasch, E., Rahbarnia, K., Stange, T., Sunn Pedersen, T., Svensson, J., Szepesi, T., Trimino-Mora, H., Turkin, Y., Wauters, T., Wurden, G., and Zhang, D. (Oct. 2017) “*Major results from the first plasma campaign of the Wendelstein 7-X stellarator*”, *Nuclear Fusion* **57**, 102020.
- [A122] Zuin, M., Dal Bello, S., Marrelli, L., Puiatti, M. E., Agostinetti, P., Agostini, M., Antoni, V., Auriemma, F., Barbisan, M., Barbui, T., Baruzzo, M., Belli, F., Bettini, P., Bigi, M., Bilel, R., Boldrin, M., Bolzonella, T., Bonfiglio, D., Brombin, M., Buffa, A., Bustreo, C., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cester, D., Chacón, L., Chitarin, G., Cooper, W. A., Cordaro, L., Dalla Palma, M., Deambrosis, S., Delogu, R., De Lorenzi, A., De Masi, G., Dong, J. Q., Escande, D. F., Fassina, A., Felici, F., Ferro, A., Finotti, C., Franz, P., Frassinetti, L., Gaio, E., Ghezzi, F., Giudicotti, L., Gnesotto, F., Gobbin, M., Gonzalez, W. A., Grando, L., Guo, S. C., Hanson, J. D., Hirshman, S. P., Innocente, P., Jackson, J. L., Kiyama, S., Komm, M., Kudlacek, O., Laguardia, L., Li, C., Liu, B., Liu, S. F., Liu, Y. Q., Lopez-Bruna, D., Lorenzini, R., Luce, T. C., Luchetta, A., Maistrello, A., Manduchi, G., Mansfield, D. K., Marchiori, G., Marconato, N., Marcuzzi, D., Martin, P., Martines, E., Martini, S., Mazzitelli, G., McCormack, O., Miorin, E., Momo, B., Moresco, M., Narushima, Y., Okabayashi, M., Paccagnella, R., Patel, N., Pavei, M., Peruzzo, S., Pilan, N., Pigatto, L., Piovan, R., Piovesan, P., Piron, C., Piron, L., Predebon, I., Pucella, G., Rea, C., Recchia, M., Rizzolo, A., Rostagni, G., Ruset, C., Saj Bohus, L., Sakakita, H., Sanchez, R., Sarff, J. S., Sattin, F., Scarin, P., Schmitz, O., Schneider, W., Siragusa, M., Sonato, P., Spada, E., Spagnolo, S., Spolaore, M., Spong, D. A., Spizzo, G., Stevanato, L., Suzuki, Y., Taliercio, C., Terranova, D., Tudisco, O., Urso, G., Valente, M., Valisa, M., Vallar, M., Veranda, M., **Vianello, N.**, Villone, F., Vincenzi, P., Vison, N., White, R. B., Xanthopoulos, P.,

- Xu, X. Y., Yanovskiy, V., Zamengo, A., Zanca, P., Zaniol, B., Zanotto, L., Zhang, Y., and Zilli, E. (Oct. 2017) "Overview of the RFX-mod fusion science activity", *Nuclear Fusion* **57**, 102012.
- [A123] Agostinetti, P., Spolaore, M., Brombin, M., Cervaro, V., Franchin, L., Grulke, O., Killer, C., Martines, E., Moresco, M., Peruzzo, S., **Vianello, N.**, and Visentin, M. (2018) "Design of a High Resolution Probe Head for Electromagnetic Turbulence Investigations in W7-X", *IEEE Transactions on Plasma Science* **46**, 1306–1311.
- [A124] Riva, F., **Vianello, N.**, Spolaore, M., Ricci, P., CAVAZZANA, R., Marrelli, L., and Spagnolo, S. (Feb. 2018) "Three-dimensional simulations of plasma turbulence in the RFX-mod scrape-off layer and comparison with experimental measurements", *Physics of Plasmas* **25**, 022305.
- [A125] Tsui, C. K., Boedo, J. A., Myra, J. R., Duval, B., Labit, B., Theiler, C., **Vianello, N.**, Vijvers, W. A. J., Reimerdes, H., Coda, S., Février, O., Harrison, J. R., Horaček, J., Lipschultz, B., Maurizio, R., Nespoli, F., Sheikh, U., Verhaegh, K., Walkden, N., TCV Team, and Team, E. M. (July 2018) "Filamentary velocity scaling validation in the TCV tokamak", *Physics of Plasmas* **25**, 072506.
- [A126] Agostini, M., **Vianello, N.**, Carraro, L., Carralero, D., Cavedon, M., Dux, R., Naulin, V., Spolaore, M., Wolfrum, E., and Team, t. E. M. (2019) "Neutral density estimation in the ASDEX upgrade divertor from deuterium emissivity measurements during detachment and shoulder formation", *Plasma Physics and Controlled Fusion* **61**, 115001.
- [A127] Ionita, C., Schneider, B. S., Costea, S., Vasilovici, O., Kovačič, J., Gyergyek, T., Naulin, V., Rasmussen, J. J., **Vianello, N.**, Spolaore, M., Stärz, R., and Schrittwieser, R. (2019) "Plasma potential probes for hot plasmas", *The European Physical Journal D* **73**, 73.
- [A128] Maurizio, R., Duval, B., Labit, B., Reimerdes, H., Theiler, C., Tsui, C., Boedo, J., Oliveira, H. D., Février, O., Sheikh, U., Spolaore, M., Verhaegh, K., **Vianello, N.**, Wensing, M., and Team, TCV Team, and The EUROfusion MST1. (2019) "Conduction-based model of the Scrape-Off Layer power sharing between inner and outer divertor in diverted low-density tokamak plasmas", *Nuclear Materials and Energy* **19**, 372–377.
- [A129] Schneider, B. S., Ionita, C., Costea, S., Vasilovici, O., Kovačič, J., Gyergyek, T., Končar, B., Draksler, M., Nem, R. D., Naulin, V., Rasmussen, J. J., Spolaore, M., **Vianello, N.**, Stärz, R., Herrmann, A., and Schrittwieser, R. (2019) "New diagnostic tools for transport measurements in the scrape-off layer (SOL) of medium-size tokamaks", *Plasma Physics and Controlled Fusion* **61**, 054004.
- [A130] Spolaore, M., Agostinetti, P., Killer, C., Moresco, M., Brombin, M., Cavazzana, R., Ghirardelli, R., Grenfell, G., Grulke, O., Lazerson, S. A., Martines, E., Neubauer, O., Nicolai, D., Satheeswaran, G., Schweer, B., **Vianello, N.**, and Visentin, M. (2019) "High Resolution Probe for filament transport and current density study at the edge region of W7-X", *Journal of Instrumentation* **14**, C09035–C09035.
- [A131] Vallar, M., Karpushov, A., Agostini, M., Bolzonella, T., Coda, S., Duval, B., Fasoli, A., Galperti, C., Garcia, J., Geiger, B., Goodman, T., Jacquier, R., Labit, B., Maurizio, R., Pimazzoni, A., Piron, C., Serianni, G., Testa, D., Valisa, M., Veltri, P., **Vianello, N.**, Team, T., and Team, E. M. (2019) "Status, scientific results and technical improvements of the NBH on TCV tokamak", *Fusion Engineering and Design*.
- [A132] Verhaegh, K., Lipschultz, B., Duval, B. P., Février, O., Fil, A., Theiler, C., Wensing, M., Bowman, C., Gahle, D. S., Harrison, J. R., Labit, B., Marini, C., Maurizio, R., Oliveira, H. d., Reimerdes, H., Sheikh, U., Tsui, C. K., **Vianello, N.**, and Vijvers, W. A. J. (2019) "An improved understanding of the roles of atomic processes and power balance in divertor target ion current loss during detachment", *Nuclear Fusion* **59**, 126038.
- [A133] **Vianello, N.**, Carralero, D., Tsui, C. K., Naulin, V., Agostini, M., Cziegler, I., Labit, B., Theiler, C., Wolfrum, E., Aguiam, D., Allan, S., Bernert, M., Boedo, J., Costea, S., Oliveira, H. D., Février, O., Galdon-Quiroga, J., Grenfell, G., Hakola, A., Ionita, C., Isliker, H., Karpushov, A., Kovacic, J., Lipschultz, B., Maurizio, R., McClements, K., Militello, F., Nielsen, A. H., Olsen, J., Rasmussen, J. J., Ravensbergen, T., Reimerdes, H., Schneider, B., Schrittwieser, R., Seliunin, E., Spolaore, M., Verhaegh, K., Vicente, J., Walkden, N., and Zhang, W. (2019) "Scrape-off layer transport and filament characteristics in high-density tokamak regimes", *Nuclear Fusion* **60**, 016001.

National and international conference

- [B1] Antoni, V., Valisa, M., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Bartiromo, R., Bettini, P., Boboc, A., T.Bolzonella, Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Chitarin, G., Costa, S., D'Angelo, F., Bello, S. D., Lorenzi, A. D., Desideri, D., Escande, D., Fattorini, L., Fiorentin, P., Franz, P., Gaio, E., Garzotti, L., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Intravaia, A., Lorenzini, R., Lucchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marrelli, L., Martin, P., Martines, E., Martini, S., Maschio, A., and F. Milani, A. M., Moresco, M., Murari, A., Nielsen, P., O'Gorman, M., Ortolani, S., Paccagnella, R., Pasqualotto, R., Pégurie, B., Peruzzo, S., Piovan, R., Pomaro, N., Ponno, A., Preti, G.,

Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Spizzo, G., Spolaore, M., Taliercio, C., Telesca, G., Terranova, D., Toiogo, V., Tramontin, L., **Vianello, N.**, Viterbo, M., Zabeo, L., Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., and Zollino, G. (2000) *“Transport Mechanisms and Enhanced Confinement Studies in RFX”*, in: *Proceedings of the 18th IAEA Fusion Energy Conference*, Sorrento, Italy.

- [B2] Martin, P., Martini, S., Antoni, V., Apolloni, L., Bagatin, M., W.Baker, Barana, O., Bartiromo, R., Bettini, P., Boboc, A., T.Bolzonella, Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Chitarin, G., Costa, S., D’Angelo, F., Bello, S. D., Lorenzi, A. D., Desideri, D., Escande, D., Fattorini, L., Fiorentin, P., Franz, P., Gaio, E., Garzotti, L., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Intravaia, A., Lorenzini, R., Lucchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marrelli, L., Martin, P., Martines, E., Martini, S., Maschio, A., and F. Milani, A. M., Moresco, M., Murari, A., Nielsen, P., O’Gorman, M., Ortolani, S., Paccagnella, R., Pasqualotto, R., Pégurie, B., Peruzzo, S., Piovan, R., Pomaro, N., Ponno, A., Preti, G., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Spizzo, G., Spolaore, M., Taliercio, C., Telesca, G., Terranova, D., Toiogo, V., Tramontin, L., **Vianello, N.**, Viterbo, M., Zabeo, L., Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., and Zollino, G. (2000) *“New Insights into MHD Dynamics of Magnetically Confined Plasmas from Experiments in RFX”*, in: *Proceedings of the 18th IAEA Fusion Energy Conference*, Sorrento, Italy.
- [B3] Tramontin, L., Antoni, V., Bagatin, M., Carraro, L., Cavazzana, R., Desideri, D., Lorenzi, A. D., Garzotti, L., Innocente, P., Lorenzini, R., Martines, E., Pasqualotto, R., Serianni, G., Spolaore, M., and **Vianello, N.** (2000) *“Particle and Momentum Balance During Edge Biasing in RFX”*, in: *Proceedings 27th EPS Conference on Contr.Fusion and Plasma Physics*, pp.1368, Budapest.
- [B4] Antoni, V., Carbone, V., Cavazzana, R., Fattorini, L., Martines, E., Regnoli, G., Serianni, G., Spada, E., Spolaore, M., Tramontin, L., and **Vianello, N.** (2001) *“Bursty fluctuation events in magnetically confined plasmas: avalanche-like SOC processes or MHD turbulence?”*, in: *Proceedings 28th EPS Conference on Controlled Fusion and Plasma Physics*, pp.1573, Funchal, Portugal.
- [B5] Bergsaker, H., Antoni, V., Brunsell, P., Drake, J., and M. Spolaore, G. S., S  therblom, H., and **Vianello, N.** (2001) *“Turbulence and plasma rotation in the edge region of EXTRAP-T2R”*, in: *Proceedings 28th EPS Conference on Controlled Fusion and Plasma Physics*, pp.1685, Funchal, Portugal.
- [B6] Serianni, G., Antoni, V., Paganucci, F., Rossetti, P., Spolaore, M., **Vianello, N.**, Bagatin, M., and Andrenucci, M. (2001) *“Electron temperature measurements in a magneto-plasma-dynamic thruster”*, in: *Proceedings of XXV International Conference on Phenomena in Ionised Gases, Nagoya, Giappone*, pp.311.
- [B7] **Vianello, N.**, Regnoli, G., Antoni, V., Carbone, V., Martines, E., Serianni, G., and Veltri, P. (2001) *“Electrostatic turbulence intermittency driven by MHD relaxation phenomena in a RFP plasma”*, in: *Proceedings 28th EPS Conference on Controlled Fusion and Plasma Physics*, Funchal, Portugal.
- [B8] Spolaore, M., Antoni, V., Bergs  ker, H., Cavazzana, R., Drake, J., Martines, E., Regnoli, G., Serianni, G., Spada, E., and **Vianello, N.** (2002) *“Intermittent events and electrostatic structures in the edge region of reversed field pinch experiments”*, in: *Proceedings 29th EPS Conference on Controlled Fusion and Plasma Physics*, pp.O3.25, Montreux, Switzerland.
- [B9] **Vianello, N.**, Antoni, V., Paganucci, F., Serianni, G., Zuin, M., Cavazzana, R., Spolaore, M., Rossetti, P., Bagatin, M., and Andrenucci, M. (2002) *“Electrostatic fluctuations in a magneto-plasma-dynamics (MPD) thruster”*, in: *Proceedings 29th EPS Conference on Controlled Fusion and Plasma Physics*, pp.P4.026, Montreux, Switzerland.
- [B10] Regnoli, G., Bergs  ker, H., Tennfors, E., Zonca, F., Martines, E., Spolaore, M., **Vianello, N.**, Serianni, G., Cecconello, M., Malmberg, J.-A., and Antoni, V. (2003) *“Observations of Toroidicity-Induced Alfv  n Eigenmodes (TAE) in a RFP Plasma”*, in: *Proceedings 30th EPS Conference on Contr. Fusion and Plasma Physics*, pp.P–2.167, St. Petersburg, Russia.
- [B11] Spolaore, M., Antoni, V., Bergs  ker, H., Cavazzana, R., Drake, J., Martines, E., Regnoli, G., Serianni, G., Spada, E., and **Vianello, N.** (2003) *“Features of Electrostatic Structures in Reversed Field Pinch Edge Region”*, in: *Proceedings 30th EPS Conference on Contr. Fusion and Plasma Physics*, pp.P–2.158, St. Petersburg, Russia.
- [B12] Antoni, V., Cavazzana, R., Martines, E., Serianni, G., Spada, E., Spolaore, M., **Vianello, N.**, Drake, J., Bergs  ker, H., Brunsell, P., Cecconello, M., Regnoli, G., Alfier, A., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Basso, F., Bettella, D., Bettini, P., Bolzonella, T., Bonfiglio, D., Buffa, A., Canto, A., Cappello, S., Carraro, L., Cavinato, M., Chitarin, G., Cravotta, A., Dangelo, F., Bello, S. D., Palma, M. D., de Lorenzi, A., de Pasqual, L., Desideri, D., Escande, D., Fiorentin, P., Franz, P., Frassinetti, L., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Lorenzini, R., Lucchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martini, S., Masiello, A., Milani, F., Moresco, M., Murari, A., Nielsen, P., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovan, R., Piovesan, P., Pomaro, N., Puiatti, M., Rostangi, G., Sattin, F., Schmidt, V.,

Scarin, P., Sonato, P., Spizzo, G., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., Zaccarica, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2004) *"Turbulent transport and plasma flow in the Reversed Field Pinch"*, in: *Proceedings 20nd IAEA Fusion Energy Conference*, pp.EX/8–4Ra, isbn: 92-0-100405-2, Villamoura, Portugal.

- [B13] Gnesotto, F., Luchetta, A., Marchiori, G., Piovani, R., Sonato, P., Alfieri, A., Antoni, V., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Basso, F., Bettella, D., Bettini, P., Bolzonella, T., Bonfiglio, D., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., Dangelo, F., Bello, S. D., Palma, M. D., de Lorenzi, A., de Pasqual, L., Desideri, D., Escande, D., Fiorentin, P., Franz, P., Frassinetti, L., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Grando, L., Guo, S., Innocente, P., Lorenzini, R., Malesani, G., Manduchi, G., Marcuzzi, D., Marrelli, L., Martin, P., Martinez, E., Martini, S., Masiello, A., Milani, F., Moresco, M., Murari, A., Nielsen, P., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Pivesan, P., Pomaro, N., Puiatti, M., Regnoli, G., Rostagni, G., Sattin, F., Schmidt, V., Scarin, P., Spada, G. S. a. E., Spizzo, G., Spolaore, M., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Zacaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2004) *"RFX: new tools for real-time MHD control"*, in: *Proceedings 20nd IAEA Fusion Energy Conference*, pp.FT/P7–9, isbn: 92-0-100405-2, Villamoura, Portugal.
- [B14] Regnoli, G., **Vianello, N.**, Yagi, Y., Martinez, E., Serianni, G., Antoni, V., and Ji, H. (2004) *"Fast Electrons and Intermittent Events in the RFP Device TPE-1RM20"*, in: *Proceedings 31st EPS Conference on Plasma Physics*, pp.P–2.109, London, UK.
- [B15] Valisa, M., Auriemma, F., Canton, A., Carraro, L., Lorenzini, R., Ortolani, S., Paccagnella, R., Puiatti, M., Sattin, F., Scarin, P., Spizzo, G., Spolaore, M., **Vianello, N.**, Alfieri, A., Antoni, V., Apolloni, L., Bagatin, M., Baker, W., Barana, O., Basso, F., Bettella, D., Bettini, P., Bolzonella, T., Bonfiglio, D., Buffa, A., Cappello, S., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., Dangelo, F., Bello, S. D., Palma, M. D., de Lorenzi, A., de Pasqual, L., Desideri, D., Escande, D., Fiorentin, P., Franz, P., Frassinetti, L., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Grando, L., Guo, S., Innocente, P., Lucchetta, A., Malesani, G., Masiello, Milani, F., Moresco, M., Murari, A., Nielsen, P., Pasqualotto, R., Peruzzo, S., Piovani, R., Pomaro, P. P. a. N., Regnoli, G., Rostagni, G., Schmidt, V., Serianni, G., Sonato, P., Spada, E., Taliercio, C., Terranova, D., Toigo, V., Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2004) *"The Greenwald density limit in the Reversed Field Pinch"*, in: *Proceedings 20nd IAEA Fusion Energy Conference*, pp.EX/P4–13, isbn: 92-0-100405-2, Villamoura, Portugal.
- [B16] **Vianello, N.**, Spada, E., Antoni, V., Spolaore, M., Serianni, G., Regnoli, G., Cavazzana, R., Martinez, E., Begsaker, H., and Drake, J. R. (2004) *"Turbulence and Plasma Flow Self-Organisation in a Reversed Field Pinch Configuration"*, in: *Proceedings 31st EPS Conference on Plasma Physics*, pp.P–2.110, London, UK.
- [B17] Bolzonella, T., Terranova, D., Zanca, P., Zuin, M., Cavazzana, R., Grando, L., Martinez, E., Pomaro, N., Serianni, G., and **Vianello, N.** (2005) *"Overview of global MHD behaviour in the RFX-mod Reversed Field Pinch"*, in: *Proceedings 32th EPS Conference in Plasma Physics Contr. Fusion*, pp.P–1.107, Tarragona, Spain.
- [B18] Cavazzana, R., Scarin, P., Serianni, G., Agostini, M., and **Vianello, N.** (2005) *"Optical Investigation of Edge Turbulence on RFX-mod"*, in: *Proceedings 32th EPS Conference in Plasma Physics Contr. Fusion*, pp.P–1.073, Tarragona, Spain.
- [B19] Martinez, E., Antoni, V., Bolzonella, T., Cavazzana, R., Pomaro, N., Regnoli, G., Serianni, G., Spolaore, M., **Vianello, N.**, and Zuin, M. (2005) *"High frequency magnetic field fluctuations measured on the RFX-mod experiment with internal coils"*, in: *Proceedings 32th EPS Conference in Plasma Physics Contr. Fusion*, pp.P–4.028, Tarragona, Spain.
- [B20] S.Martini, P.Innocente, Agostini, M., Alfieri, A., Antoni, V., Apolloni, L., Auriemma, F., Bagatin, M., Baker, W., Barana, O., Basso, F., Bettini, P., Bolzonella, T., Bonfiglio, D., F.Bonomo, Buffa, A., Canton, A., Cappello, S., Cavazzana, L. C. R., Cavinato, M., Chitarin, G., Cravotta, A., Bello, F. S. D., Palma, M. D., Lorenzi, A. D., Pasqual, L. D., Desideri, D., Escande, D., Franz, P., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martinez, E., Martini, S., Masiello, A., Milani, F., Moresco, M., Murari, A., Nielsen, P., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovani, R., Piovesan, P., Predebon, I., Pomaro, N., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Schmidt, V., Serianni, G., Sonato, P., Spada, E., Spizzo, G., Spolaore, M., Taccon, C., Taliercio, C., Terranova, D., Toigo, V., M.Valisa, **Vianello, N.**, Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2005) *"First results on the Reversed Field Pinch plasmas with new magnetic boundary"*, in: *Proceedings 32th EPS Conference in Plasma Physics Contr. Fusion*, pp.P–5.054, Tarragona, Spain.
- [B21] Serianni, G., Spolaore, M., **Vianello, N.**, Cavazzana, R., Martinez, E., Pomaro, N., Zuin, M., Agostini, M., Bagatin, M., and Antoni, V. (2005) *"Electrostatic turbulence in the edge region of RFX-mod"*, in: *Proceedings 32th EPS Conference in Plasma Physics Contr. Fusion*, pp.P–4.030, Tarragona, Spain.

- [B22] Yagi, Y., Koguchi, H., Kiyama, S., Sakakita, H., Hirano, Y., Cavazzana, R., Scarin, P., Serianni, G., Agostini, M., **Vianello, N.**, and Antoni, V. (2005) “First results of the Gas Puffing Imaging Diagnostic in a reversed-field pinch plasma”, in: *Proceedings 32th EPS Conference in Plasma Physics Contr. Fusion*, pp.P–1.046, Tarragona, Spain.
- [B23] Innocente, P., Alfier, A., Carraro, L., Lorenzini, R., Pasqualotto, R., Agostini, M., Alessi, C., Antoni, V., Apolloni, L., Auriemma, F., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., Bello, S. D., de Lorenzi, A., de Pasqual, L., Escande, D., Fassina, A., Franz, P., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martini, S., Martines, E., Masiello, A., Milani, F., Moresco, M., Murari, A., Novello, L., Ortolani, S., Paccagnella, R., Peruzzo, S., Piovani, R., Piovesan, P., Pizzimenti, A., Pomaro, N., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spizzo, G., Spolaore, M., Taccon, C., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2006) “Transport and confinement studies in RFX-mod Reversed Field Pinch experiment”, in: *Proceedings 21nd IAEA Fusion Energy Conference*, pp.EX/P3–10, Chendu, China.
- [B24] Luchetta, A., Cavinato, M., Gaio, E., Grando, L., Manduchi, G., Marchiori, G., Pomaro, N., Soppelsa, A., Agostini, M., Alessi, C., Alfier, A., Antoni, V., Apolloni, L., Auriemma, F., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Chitarin, G., Cravotta, A., Bello, S. D., de Lorenzi, A., de Pasqual, L., Escande, D., Fassina, A., Franz, P., Gadani, G., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Guo, S., Innocente, P., Lorenzini, R., Malesani, G., Marcuzzi, D., Marrelli, L., Martin, P., Martini, S., Martines, E., Masiello, A., Milani, F., Moresco, M., Murari, A., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovani, R., Piovesan, P., Pizzimenti, A., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Spizzo, G., Spolaore, M., Taccon, C., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2006) “Recent results from real time active control of MHD modes in RFX-mod”, in: *Proceedings 21nd IAEA Fusion Energy Conference*, pp.FT/P5–1, Chendu, China.
- [B25] Martini, S., Agostini, M., Alessi, C., Alfier, A., Antoni, V., Apolloni, L., Auriemma, F., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., Bello, S. D., Lorenzi, A. D., Pasqual, L. D., Escande, D. F., Fassina, A., Franz, P., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S., Innocente, P., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martines, E., Masiello, A., Milani, F., Moresco, M., Murari, A., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovani, R., Piovesan, P., Pizzimenti, A., Pomaro, N., Puiatti, M., Rostagni, G., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spizzo, G., Spolaore, M., Taccon, C., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2006) “Overview of RFX-mod results with active MHD control”, in: *Proceedings 21nd IAEA Fusion Energy Conference*, pp.EX/7–3, Chendu, China.
- [B26] Sattin, F., Scarin, P., Agostini, M., Cavazzana, R., Serianni, G., Valisa, M., **Vianello, N.**, Yagi, Y., Koguchi, H., Kiyama, S., Sakakita, H., and Hirano, Y. (2006) “Statistical features of edge turbulence in the TPE-RX and RFX-mod from gas puffing imaging”, in: *Proceedings 33rd EPS Conference in Plasma Physics Contr. Fusion*, pp.P–5.093, Rome, Italy.
- [B27] Spolaore, M., **Vianello, N.**, Cavazzana, R., Martines, E., Serianni, G., Spada, E., Zuin, M., Scarin, P., Agostini, M., and Antoni, V. (2006) “Electrostatic and magnetic structure in the edge region of RFX-mod experiment”, in: *Proceedings 33th EPS Conference on Controlled Fusion and Plasma Physics*, pp.P5.097, isbn: 2-914771-40-1, Rome, Italy.
- [B28] Valisa, M., Frassinetti, L., Paccagnella, R., Puiatti, M., Sattin, F., Scarin, P., Spizzo, G., Spolaore, M., **Vianello, N.**, Agostini, M., Alessi, C., Alfier, A., Antoni, V., Apolloni, L., Auriemma, F., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chitarin, G., Cravotta, A., Bello, S. D., de Lorenzi, A., de Pasqual, L., Escande, D., Fassina, A., Franz, P., Gadani, G., Gaio, E., Garzotti, L., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S., Innocente, P., Lorenzini, R., Luchetta, A., Malesani, G., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martin, P., Martini, S., Martines, E., Masiello, A., Milani, F., Moresco, M., Novello, L., Ortolani, S., Pasqualotto, R., Peruzzo, S., Piovani, R., Piovesan, P., Pizzimenti, A., Pomaro, N., Predebon, I., Rostagni, G., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Taccon, C., Taliercio, C., Terranova, D., Toigo, V., Zaccaria, P., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zollino, G., and Zuin, M. (2006) “Edge transport properties of RFX-mod approaching the Greenwald density limit”, in: *Proceedings 21nd IAEA Fusion Energy Conference*, pp.EX/P3–17, Chendu, China.

- [B29] **Vianello, N.**, Spada, E., Cavazzana, R., Martines, E., Serianni, G., Spolaore, M., Zuin, M., and Antoni, V. (2006) “*Turbulent flow and energy transfer in the RFX-Mod device*”, in: *Bullettin of the American Physical Society, 48th Annual meeting of the APS Division of Plasma Physics*, pp.UP1.00053, Philadelphia, PN, USA.
- [B30] **Vianello, N.**, Spada, E., Cavazzana, R., Martines, E., Serianni, G., Spolaore, M., Zuin, M., and Antoni, V. (2006) “*Turbulent energy transfer in the RFX-Mod device*”, in: *Proceedings 33d EPS Conference in Plasma Physics Contr. Fusion*, pp.P–5.085, Rome, Italy.
- [B31] Zuin, M., Martines, E., Serianni, G., Bolzonella, T., Cavazzana, R., **Vianello, N.**, Spolaore, M., and Antoni, V. (2006) “*Investigation of high frequency magnetic fluctuations in the RFX-mod device*”, in: *Proceedings 33rd EPS Conference in Plasma Physics Contr. Fusion*, pp.P–5.091, Rome, Italy.
- [B32] Agostini, M., Cavazzana, R., Sattin, F., Scarin, P., Serianni, G., Spolaore, M., and **Vianello, N.** (2007) “*Characterisation of 2-dimensional edge turbulence of RFX-mod experiment*”, in: *Proceedings 34th EPS Conference on Controlled Fusion and Plasma Physics*, pp.P2.044, Warsaw, Poland.
- [B33] Zuin, M., **Vianello, N.**, M.Spolaore, Bolzonella, T., Cavazzana, R., Martines, E., Terranova, D., Serianni, G., Spada, E., and Antoni, V. (2007) “*Fast dynamics of relaxation event in RFX-mod device*”, in: *Proceedings 34th EPS Conference on Controlled Fusion and Plasma Physics*, pp.P1.118, Warsaw, Poland.
- [B34] Martin, P., Apolloni, L., Puiatti, M., Adamek, J., Agostini, M., Alfier, A., Annibaldi, S., Antoni, V., Auriemma, F., Barana, O., Baruzzo, M., Bettini, P., Bolzonella, T., Bonfiglio, D., Bonomo, F., Brombin, M., Brotankova, J., Buffa, A., Buratti, P., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chapman, B., Chitarin, G., Bello, S. D., Lorenzi, A. D., Masi, G. D., Escande, D., Fassina, A., Ferro, A., Franz, P., Gaio, E., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guazzotto, L., Guo, S., Igochine, V., Innocente, P., Liu, Y., Lorenzini, R., Luchetta, A., Manduchi, G., Marchiori, G., Marcuzzi, D., Marrelli, L., Martini, S., Martines, E., Mccollam, K., Menmuir, S., Milani, F., Moresco, M., Novello, L., Ortolani, S., Paccagnella, R., Pasqualotto, R., Peruzzo, S., Piovan, R., Piovesan, P., Piron, L., Pizzimenti, A., Pomaro, N., Predebon, I., Reusch, J., Rostagni, G., Rubinacci, G., Sarff, J., Sattin, F., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spolaore, M., Spizzo, G., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., **Vianello, N.**, Villone, F., White, R., Yadikin, D., Zaccaria, P., Zamengo, A., Zanca, P., Zaniol, B., Zanotto, L., Zilli, E., Zohm, H., and Zuin, M. (2008) “*Overview of RFX-mod results*”, in: *Proceedings 22nd IAEA Fusion Energy Conference*, pp.OV/5–2Ra, Geneva, Switzerland.
- [B35] Martines, E., Alfier, A., Agostini, M., Canton, A., Cavazzana, R., Masi, G. D., Fassina, A., Innocente, P., Lorenzini, R., Scarin, P., Serianni, G., Spolaore, M., Terranova, D., **Vianello, N.**, and Zuin, M. (2008) “*Transport Mechanisms in the Outer Region of RFX-mod*”, in: *Proceedings 22nd IAEA Fusion Energy Conference*, pp.EX/P5–26, Geneva, Switzerland.
- [B36] Piovesan, P., Zuin, M., Alfier, A., Bonfiglio, D., Bonomo, F., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Gobbin, M., Marrelli, L., Martines, E., Lorenzini, R., Pasqualotto, R., Spolaore, M., Valisa, M., **Vianello, N.**, and Zanca, P. (2008) “*Magnetic order improvement through high current and MHD feedback control in RFX-mod*”, in: *Proceedings 35th EPS Conference on Controlled Fusion and Plasma Physics*, pp.O4.029, Hersonissos, Greece.
- [B37] **Vianello, N.**, Agostini, M., A.Fassina, A.Canton, Lorenzini, R., Alfier, A., Cavazzana, R., Martines, E., Scarin, P., Serianni, G., Spizzo, G., Spolaore, M., and Zuin, M. (2008) “*Turbulence, transport and their relation with the magnetic boundary in the RFX-mod device*”, in: *Proceedings 35th EPS Conference on Controlled Fusion and Plasma Physics*, pp.O4.049, Hersonissos, Greece.
- [B38] Agostini, M., Scarin, P., Alfier, A., Auriemma, F., Bonomo, F., Cavazzana, R., V.Cervaro, A.Fassina, M.Gobbin, Puiatti, M., Serianni, G., Spizzo, G., Spolaore, M., and **Vianello, N.** (2009) “*Plasma edge properties in different magnetic topologies in the RFX-mod device*”, in: *Proceedings 36th EPS Conference on Plasma Physics*, pp.P2.179, Sofia, Bulgaria.
- [B39] Spizzo, G., Scarin, P., Agostini, M., Alfier, A., Auriemma, F., Cappello, S., Fassina, A., Franz, P., Lorenzini, R., Paccagnella, R., Piron, L., Piovesan, P., Predebon, I., Puiatti, M., Valisa, M., **Vianello, N.**, and Zuin, M. (2009) “*Investigation on the relation between edge electric radial field asymmetries in RFX-mod and Greenwald limit*”, in: *Proceedings 36th EPS Conference on Plasma Physics*, pp.O2.003, Sofia, Bulgaria.
- [B40] Spolaore, M., Masi, G. D., **Vianello, N.**, Agostini, M., Cavazzana, R., Lorenzini, R., Martines, E., Momo, B., Scarin, P., Serianni, G., Spagnolo, S., and Zuin, M. (2009) “*Parallel and perpendicular flow measurements in the edge region of RFX-mod*”, in: *Proceedings 36th EPS Conference on Plasma Physics, Sofia*, pp.P2.186, Sofia, Bulgaria.
- [B41] **Vianello, N.**, Schrittwieser, R., Naulin, V., Müller, H., Zuin, M., Ionita, C., Mehlmann, F., Rasmussen, J., Rohde, V., Cavazzana, R., Maraschek, M., and Lupu, C. (2009) “*Local electromagnetic characterization of type I ELMS on ASDEX Upgrade*”, in: *Proceedings 36th EPS Conference on Plasma Physics*, pp.P–1.166, Sofia, Bulgaria.

- [B42] **Vianello, N.**, Spolaore, M., Martines, E., Agostini, M., Cavazzana, R., Scarin, P., Serianni, G., Spada, E., and Zuin, M. (2009) “*Current filament structures in the edge region of the RFX-mod device*”, in: *Proceedings 36th EPS Conference on Plasma Physics*, pp.P2.187, Sofia, Bulgaria.
- [B43] Zanutto, L., Cavazzana, R., Bello, S. D., Franz, P., Lorenzini, R., Marchiori, G., Milani, F., Spizzo, G., Spolaore, M., Terranova, D., **Vianello, N.**, Alfier, A., and Piovesan, P. (2009) “*Optimization of the RFX-Mod performance at high current*”, in: *Proceedings 36th EPS Conference on Plasma Physics*, pp.P2.188, Sofia, Bulgaria.
- [B44] Martin, P., Adamek, Agostini, M., Alfier, A., Angioni, C., Antoni, V., Apolloni, L., Auriemma, F., Barana, O., Barison, S., Baruzzo, M., Bettini, P., Boldrin, M., Bolzonella, T., Bonfiglio, D., Bonomo, F., Boozer, A. H., Brombin, M., Brotankova, J., Buffa, A., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Cavinato, M., Chacon, L., Chitarin, G., Cooper, A. W., Bello, S. D., Palma, M. D., Delogu, R., Lorenzi, A. D., Masi, G. D., Dong, J. Q., Drevlak, M., Escande, D. F., Fantini, F., Fassina, A., Ferro, A., Fiameni, S., Franz, P., Gaio, E., Garbet, X., Gazza, E., Giudicotti, L., Gnesotto, F., Gobbin, M., Grando, L., Guo, S. C., Hirshman, S. P., Ide, S., Igochine, V., In, Y., Innocente, P., Liu, S. F., Y.Q.Liu, Bruna, D. L., Lorenzini, R., Luchetta, A., Manduchi, G., Mansfield, D. K., Marchiori, G., Marcuzzi, D., Marrelli, L., Martini, S., Matsunaga, G., Martines, E., Mazzitelli, G., McCollam, K., Menmuir, S., Milani, F., Momo, B., Moresco, M., Munaretto, S., Novello, L., Okabayashi, M., Ortolani, S., Paccagnella, R., Pasqualotto, R., Perverezhev, G. V., Peruzzo, S., Piovan, R., Piovesan, P., Piron, L., Pizzimenti, A., Pomaro, N., Pomphrey, N., Predebon, I., Puiatti, M., Rizzolo, A., Rostagni, G., Rubinacci, G., Ruzzon, A., Sanchez, R., Sarff, J. S., Sattin, F., Scaggion, A., Scarin, P., Serianni, G., Sonato, P., Spada, E., Soppelsa, A., Spagnolo, S., Spolaore, M., Spong, D. A., Spizzo, G., Takechi, M., Taliercio, C., Terranova, D., Toigo, V., Valisa, M., Veranda, M., **Vianello, N.**, Villone, F., Wang, Z., White, R. B., Yadikin, D., Zaccaria, P., Zamengo, A., Zanca, P., Zaniol, B., Zanutto, L., Zilli, E., Zohm, H., Zollino, G., and Zuin, M. (2010) “*Overview of RFX fusion science program*”, in: *Proceedings 23rd IAEA Fusion Energy Conference*, pp.OV/5–3Ra, Daejeon, Korea Rep. of.
- [B45] Mehlmann, F., Ionita, C., Naulin, V., Rasmussen, J., Müller, H., **Vianello, N.**, Maszl, C., Rohde, V., Zuin, M., Cavazzana, R., Maraschek, M., and Schrittwieser, R. (2010) “*Transport of momentum in the SOL of Asdex Upgrade*”, in: *Proceedings 37st EPS Conference on Plasma Physics*, pp.P1.1064, Dublin, Ireland.
- [B46] Müller, H., Adamek, J., Cavazzana, R., Conway, G., Gunn, J., Herrmann, A., Horacek, J., ionita, C., Kocan, M., Maraschek, M., Maszl, C., Mehlmann, F., Nold, B., Peterka, M., Rohde, V., Schrittwieser, R., **Vianello, N.**, Wolfrum, E., and Zuin, M. (2010) “*Fluctuations, ELM Filaments and Turbulent Transport in the SOL at the Outer Midplane of ASDEX Upgrade*”, in: *Proceedings 23rd IAEA Fusion Energy Conference*, Daejeon, Korea Rep. of.
- [B47] Naulin, V., **Vianello, N.**, Schrittwieser, R., Müller, H., Migliucci, P., Zuin, M., Ionita, C., Maszl, C., Mehlmann, F., Rasmussen, J., Rohde, V., Cavazzana, R., and Maraschek, M. (May 2010) “*Magnetic diagnostic of SOL-filaments generated by type I ELMs on JET and ASDEX Upgrade*”, in: *Proceedings of the 19th International Conference on Plasma Surface Interaction*.
- [B48] Puiatti, M., Valisa, M., Alfier, A., Agostini, M., Apolloni, L., Auriemma, F., Baruzzo, M., Bolzonella, T., Bonfiglio, D., Bonomo, F., Canton, A., Cappello, S., Carraro, L., Cavazzana, R., Bello, S. D., Masi, G. D., Escande, D., Fassina, A., Franz, P., Gazza, E., Gobbin, M., Guo, S., Innocente, P., Lorenzini, R., Marchiori, G., Marrelli, L., Martin, P., Martines, E., Martini, S., Menmuir, S., Momo, B., Novello, L., Paccagnella, R., Piovesan, P., Piron, L., Predebon, I., Ruzzon, A., Sattin, F., Scaggion, A., Scarin, P., Soppelsa, A., Spizzo, G., Spagnolo, S., Spolaore, M., Terranova, D., Veranda, M., **Vianello, N.**, Zanca, P., Zaniol, B., Zanutto, L., and Zuin, M. (2010) “*Internal and edge electron transport barriers in the RFX-mod Reversed Field Pinch*”, in: *Proceedings 23rd IAEA Fusion Energy Conference*, Daejeon, Korea Rep. of.
- [B49] Scarin, P., Agostini, M., Alfier, A., Carraro, L., Cavazzana, R., Cervaro, V., Fassina, A., Munaretto, S., Sattin, F., Serianni, G., Spizzo, G., Spolaore, M., and **Vianello, N.** (May 2010) “*Plasma Pressure Gradient in the Edge of RFX-mode Helical Regimes*”, in: *Proceedings of the 19th International Conference on Plasma Surface Interaction*.
- [B50] Scarin, P., **Vianello, N.**, Agostini, M., Cappello, S., Carraro, L., Cavazzana, R., Masi, G. D., Martines, E., Moresco, M., Munaretto, S., Puiatti, M., Spizzo, G., Spolaore, M., Valisa, M., and Zuin, M. (2010) “*Magnetic Structures and Pressure Profiles in the Plasma Boundary of RFX-mod: High Current and Density Limit in Helical Regimes*”, in: *Proceedings 23rd IAEA Fusion Energy Conference*, Daejeon, Korea Rep. of.
- [B51] Spagnolo, S., Zuin, M., Cavazzana, R., Masi, G. D., Martines, E., Spolaore, M., and **Vianello, N.** (2010) “*Alfvén Eigenmodes in the RFX-mod reversed field pinch plasma*”, in: *Proceedings 37st EPS Conference on Plasma Physics*, pp.P4.162, Dublin, Ireland.
- [B52] Spolaore, M., Masi, G. D., **Vianello, N.**, Agostini, M., Bonfiglio, D., Cavazzana, R., Lorenzini, R., Martines, E., Momo, B., Scarin, P., Serianni, G., Spagnolo, S., and Zuin, M. (May 2010) “*Parallel and perpendicular flows in the RFX-mod edge region*”, in: *Proceedings of the 19th International Conference on Plasma Surface Interaction*.

- [B53] **Vianello, N.**, Spolaore, M., De Masi, G., Agostini, M., Bonfiglio, D., Cavazzana, R., Lorenzini, R., Martines, E., Momo, B., Scarin, P., Spagnolo, S., and Zuin, M. (2010) “Flow, magnetic topology and transport in the edge region of RFX-mod device”, in: *Bullettin of the American Physical Society, 52th Annual meeting of the APS Division of Plasma Physics*, pp.GO4.00010, Chicago, IL, USA.
- [B54] **Vianello, N.**, Spolaore, M., Martines, E., Agostini, M., Cavazzana, R., Scarin, P., Zuin, M., Naulin, V., Rasmussen, J. J., Schrittwieser, R., Ionita, C., Müller, H. W., Rhode, V., Furno, I., and Theiler, C. (2010) “Current filaments in magnetized plasmas”, in: *Bullettin of the American Physical Society, 52th Annual meeting of the APS Division of Plasma Physics*, pp.XP9.00008, Chicago, IL, USA.
- [B55] Xu, Y., **Vianello, N.**, Spolaore, M., Martines, E., Manz, P., Stroth, U., Silva, C., Pedrosa, M., Hidalgo, C., Carralero, D., Jachmich, S., van Milligen, B., Ramisch, M., and Shesterikov, I. (2010) “Long-Range Correlations and Edge Transport Bifurcation in Fusion Plasmas”, ed. by IAEA, in: *Proceedings 23rd IAEA Fusion Energy Conference*, Daejeon, Korea Rep. of.
- [B56] Zanotto, L., Cavazzana, R., Lorenzini, R., Novello, L., Zuin, M., Bello, S. D., Franz, P., Marchiori, G., Piovesan, P., Terranova, D., Spizzo, G., Spolaore, M., and **Vianello, N.** (2010) “Optimisation of the RFX-mod experiment for 2MA operation”, in: *Proceedings 37th EPS Conference on Plasma Physics*, pp.P2.193, Dublin, Ireland.
- [B57] Fasoli, A., Bovet, A., Furno, I., Gustafson, K., Iraj, D., Labit, B., Lancon, D., Loizu, J., Ricci, P., Theiler, C., Spolaore, M., **Vianello, N.**, and Cavazzana, R. (2011) “Overview of Turbulence and Transport Studies in the TORPEX Simple Magnetized Plasmas”, in: *Proceedings 38th EPS Conference on Plasma Physics*, pp.P1.003, Strasbourg, France.
- [B58] Scaggion, A., Agostini, M., Carraro, L., Fassina, A., Lorenzini, R., Momo, B., Munaretto, S., Puiatti, M. E., Spizzo, G., Valisa, M., and **Vianello, N.** (2011) “Characterization of external electron temperature profiles in the RFX-mod Reversed Field Pinch”, in: *Proceedings 38th EPS Conference on Plasma Physics*, pp.P5.059, Strasbourg, France.
- [B59] Spolaore, M., Agostini, M., Bonfiglio, D., Bonomo, F., Cappello, S., Carraro, L., de Masi, G., Escande, D. F., Gobbin, M., Innocente, P., Marrelli, L., Martines, E., Momo, B., Piovesan, P., Scarin, P., Spizzo, G., **Vianello, N.**, and Zaniol, B. (2011) “Helical flow in the RFX-mod Reversed Field Pinch experiment”, in: *Proceedings 38th EPS Conference on Plasma Physics*, pp.P5.081, Strasbourg, France.
- [B60] Zuin, M., Spagnolo, S., Auriemma, F., Cavazzana, R., de Masi, G., Momo, B., Martines, E., Scarin, P., Schneider, W., Spolaore, M., and **Vianello, N.** (2011) “Alfvén Eigenmodes and Magnetic reconnection in the RFX-mod reversed-field pinch plasma”, in: *Proceedings 38th EPS Conference on Plasma Physics*, pp.P5.135, Strasbourg, France.
- [B61] Agostini, M., Carraro, L., Cavazzana, R., de Masi, G., Scaggion, A., Scarin, P., Spolaore, M., **Vianello, N.**, and Zaniol, B. (July 2012) “Interaction between turbulence and electron profiles in the RFX-mod helical plasma edge”, in: *Proceedings 39th EPS Conference on Plasma Physics, Stockholm, Sweden*, pp.P1.037, Stockholm, Sweden.
- [B62] de Masi, G., Agostini, M., Auriemma, F., Cavazzana, R., Martines, E., Momo, B., Scarin, P., Spolaore, M., Spizzo, G., **Vianello, N.**, and Zuin, M. (July 2012) “Edge flow and radiation in Helium discharges in RFX”, in: *Proceedings 39th EPS Conference on Plasma Physics, Stockholm, Sweden*, pp.P5.003.
- [B63] Mehlmann, F., Schrittwieser, R. W., Naulin, V., Rasmussen, J. J., Muller, H. W., Ionita, C., Nielsen, A., **Vianello, N.**, and Rohde, V. (2012) “Radial transport of poloidal momentum in ASDEX Upgrade in L-mode and H-mode”, in: *Proceedings 39th EPS Conference on Plasma Physics, Stockholm, Sweden*, pp.P2.090, Stockholm, Sweden.
- [B64] Momo, B., de Masi, G., Auriemma, F., Cavazzana, R., Fassina, A., Marrelli, L., Martines, E., Munaretto, S., Piovesan, P., Spizzo, G., **Vianello, N.**, and Zanca, P. (July 2012) “Magnetic topology and role of the $m=0$ islands in the plasma-wall interaction in RFX-mod”, in: *Proceedings 39th EPS Conference on Plasma Physics, Stockholm, Sweden*, pp.P4.061.
- [B65] Spagnolo, S., Zuin, M., Predebon, I., Sattin, F., Auriemma, F., Cavazzana, R., Fassina, A., Paccagnella, R., Martines, E., Spolaore, M., Veranda, M., and **Vianello, N.** (July 2012) “Observations of rhoi-scale wavelength instabilities in the microtearing frequency range in RFX-mod plasma”, in: *Proceedings 39th EPS Conference on Plasma Physics, Stockholm, Sweden*, pp.P1.047.
- [B66] Spizzo, G., White, R. B., Agostini, M., Scarin, P., and **Vianello, N.** (2012) “Ambipolar edge electric field with energy dependence”, in: *Bullettin of the American Physical Society, 54th Annual meeting of the APS Division of Plasma Physics*, pp.JP8.00169, Providence, Rhode Island.
- [B67] Spolaore, M., **Vianello, N.**, Agostini, M., Cavazzana, R., de Masi, G., Martines, E., Momo, B., Scaggion, A., Scarin, P., Spagnolo, S., Spizzo, G., Zuin, M., Furno, I., Avino, F., Fasoli, A., Theiler, C., Carralero, D., Alonso, A., and Hidalgo, C. (2012) “Inter-machine scalings of plasma filament electromagnetic features”, in: *Bullettin of the American Physical Society, 54th Annual meeting of the APS Division of Plasma Physics*, pp.TP8.00040, Providence, Rhode Island.

- [B68] **Vianello, N.**, Agostini, M., Carraro, L., Cavazzana, R., De Masi, G., Martines, E., Momo, B., Scarin, P., Spagnolo, S., Spizzo, G., Spolaore, M., and Zuin, M. (2012) “3D Effects on RFX-mod helical boundary region”, in: *24th IAEA Fusion Energy Conference*, pp.EX/P8–02, San Diego, CA, USA.
- [B69] Zuin, M., Spagnolo, S., Predebon, I., Sattin, F., Auriemma, F., Cavazzana, R., Fassina, A., Martines, E., Paccagnella, R., Spolaore, M., and **Vianello, N.** (2012) “Experimental Observation of Microtearing Modes in the RFX-mod Reversed Field Pinch Plasma”, in: *Bulletin of the American Physical Society, 54th Annual meeting of the APS Division of Plasma Physics*, pp.CO7.00009, Providence, Rhode Island.
- [B70] Ciaccio, G., Schmitz, O., Agostini, M., Puiatti, M. E., Scarin, P., Spizzo, G., **Vianello, N.**, and White, R. B. (2013) “Comparison of edge island transport in tokamaks and RFPs”, in: *Proceedings of the 40th EPS Conference on Plasma Physics*, pp.P1.107, Helsinki, Finland.
- [B71] De Masi, G., Martines, E., Auriemma, F., Cavazzana, R., Momo, B., Rea, C., Spagnolo, S., Spizzo, G., Spolaore, P., **Vianello, N.**, and Zuin, M. (2013) “The role of the magnetic topology in the Reversed Field Pinch edge physics”, in: *Proceedings of the 40th EPS Conference on Plasma Physics*, pp.O2.105, Helsinki, Finland.
- [B72] Mehlmann, F., Costea, S., Naulin, V., Rasmussen, J. J., Müller, H., Nielsen, A. H., **Vianello, N.**, Carralero, D., Rohde, V., Lux, C., Schrittwieser, R. W., and Ionita, C. (2013) “On the determination of the poloidal velocity and the shear layer in the SOL of ASDEX Upgrade”, in: *Proceedings of the 40th EPS Conference on Plasma Physics*, pp.P5.187, Helsinki, Finland.
- [B73] Solano, E. R., **Vianello, N.**, Buratti, P., Alper, B., Coelho, R., Delabie, E., Devaux, S., Dodt, D., Figueiredo, A., Frassinetti, L., Howell, D., Lerche, E., Maggi, C. F., Manzanares, A., Martin, A., Morrison, P. J., Marsen, S., McCormick, K., Nunes, I., Refy, D., Rimini, F., Sirinelli, A., Sieglin, B., and Zoletnik, S. (2013) “M-mode: axi-symmetric magnetic oscillation and ELM-less H-mode in JET”, in: *Proceedings of the 40th EPS Conference on Plasma Physics*, pp.P4.111, Helsinki, Finland.
- [B74] Spolaore, M., **Vianello, N.**, Martines, E., Cavazzana, R., De Masi, G., Momo, B., Spagnolo, S., and Zuin, M. (2013) “Edge features of RFX-mod experiment operated in tokamak configuration”, in: *Proceedings of the 40th EPS Conference on Plasma Physics*, pp.P5.181, Helsinki, Finland.
- [B75] Costea, S., Nielsen, A. H., Naulin, V., Rasmussen, J. J., Müller, H. W., Conway, G. D., **Vianello, N.**, Carralero, D., Schrittwieser, R., Mehlmann, F., Lux, C., and Ionita, C. (2014) “Investigations of poloidal velocity and shear in the SOL of ASDEX Upgrade”, in: *41st EPS Conference on Plasma Physics*, pp.P2.001, Berlin.
- [B76] Kovarik, K., Spolaore, M., Duran, I., Stockel, J., Adamek, J., and **Vianello, N.** (2014) “First measurements of SOL plasma filament properties with U-probe on the COMPASS tokamak”, in: *41st EPS Conference on Plasma Physics*, pp.P5.025, Berlin.
- [B77] Rea, C., **Vianello, N.**, Agostini, M., Cavazzana, R., De Masi, G., Martines, E., Momo, B., Scarin, P., Spagnolo, S., Spizzo, G., Spolaore, M., and Zuin, M. (2014) “Investigation of edge transport properties in helically shaped RFP discharges”, in: *41st EPS Conference on Plasma Physics*, pp.P5.077, Berlin.
- [B78] Spagnolo, S., Zuin, M., Auriemma, F., Barbui, T., Cavazzana, R., De Masi, G., Innocente, P., Martines, E., Momo, B., Rea, C., Spolaore, M., Spong, D. A., and **Vianello, N.** (2014) “Characterization of Alfvén Eigenmodes in RFX-mod plasmas”, in: *41st EPS Conference on Plasma Physics*, pp.P5.085, Berlin.
- [B79] Spizzo, G., Pucella, G., Tudisco, O., Zuin, M., Agostini, M., Auriemma, F., Buratti, P., Carraro, L., Cavazzana, R., Ciaccio, G., De Masi, G., Granucci, G., Marinucci, M., Marrelli, L., Mazzotta, C., Puiatti, M. E., Scarin, P., Spolaore, M., Schmitz, O., **Vianello, N.**, and White, R. B. (2014) “Density limit studies in the tokamak and the reversed-field pinch”, in: *25th IAEA Fusion Energy Conference*, pp.EX/P1–42, Saint Petersburg, Russia.
- [B80] Spolaore, M., Agostini, M., Cavazzana, R., De Masi, G., Martines, E., Mazzi, A., Momo, B., Rea, C., Spagnolo, S., Spizzo, G., Scarin, P., **Vianello, N.**, Zanca, P., Terranova, D., and Zuin, M. (2014) “Turbulent electromagnetic filaments in actively modulated toroidal plasma edge”, in: *25th IAEA Fusion Energy Conference*, pp.EX/P1–40, Saint Petersburg, Russia.
- [B81] Spolaore, M., Cavazzana, R., De Masi, G., Finotti, C., Kudlacek, O., Marchiori, G., Martines, E., Momo, B., Rea, C., Spagnolo, S., **Vianello, N.**, and Zuin, M. (2014) “Edge effects of dynamically shaped tokamak configuration in RFX-mod experiment”, in: *41st EPS Conference on Plasma Physics*, pp.P5.073, Berlin.
- [B82] Carralero, D., Sun, H. J., Artene, S. A., Manz, P., Müller, H. W., Groth, M., Komm, M., Adamek, J., Aho-Mantila, L., Birkenmeier, G., Brix, M., Stroth, U., **Vianello, N.**, Viezzer, E., Wischmeier, M., and Wolfrum, E. (June 2015) “Towards a general scaling of the Scrape-off Layer density width”, in: *42nd EPS Conference on Plasma Physics*, pp.O2.106, Lisbon.
- [B83] Costea, S., Rasmussen, J. J., **Vianello, N.**, Müller, H. W., Naulin, V., Schrittwieser, R., Nielsen, A. H., Madsen, J., Ionita, C., Spolaore, M., Carralero, D., and Mehlmann, F. (June 2015) “Investigation on radial transport of perpendicular momentum in the SOL of AUG during L-I-H transition”, in: *42nd EPS Conference on Plasma Physics*, pp.P1.151, Lisbon.

- [B84] Liu, B., Spolaore, M., Losada, U., Alonso, A., Pedrosa, M. A., Estrada, T., van Milligen, B. P., **Vianello, N.**, and Hidalgo, C. (June 2015) “*Electromagnetic turbulence measurements during the L-H transition in the TJ-II stellarator*”, in: *42nd EPS Conference on Plasma Physics*, pp.P4.166, Lisbon.
- [B85] Spolaore, M., Kovarik, K., Stockel, J., Adamek, J., Duran, I., Komm, M., Martinez, E., Seidl, J., and **Vianello, N.** (June 2015) “*ELM and inter-ELM electromagnetic filaments in the COMPASS Scrape Off Layer*”, in: *42nd EPS Conference on Plasma Physics*, pp.P4.107, Lisbon.
- [B86] **Vianello, N.**, Solano, E., Delabie, E., Hillesheim, J., Refy, D., Zoletnik, S., Buratti, P., Boom, J. E., Coelho, R., Figueiredo, A., Lerche, E., Meneses, L., Rimini, F., Sips, A., Artaserse, G., and Belohony, E. (June 2015) “*Experimental characterization of M-Mode in JET tokamak*”, in: *42nd EPS Conference on Plasma Physics*, pp.P2.133, Lisbon.
- [B87] Zuin, M., Stevanato, L., Martinez, E., Auriemma, F., Momo, B., Cavazzana, R., De Masi, G., Gonzalez, W., Lorenzini, R., Scarin, P., Spagnolo, S., Spolaore, M., **Vianello, N.**, Schneider, W., Cester, D., Nebbia, G., Sajo-Bohus, L., and Viesti, G. (June 2015) “*Characterization of Particle Dynamics and Magnetic Reconnection in the RFX-mod Plasmas*”, in: *42nd EPS Conference on Plasma Physics*, pp.P4.158, Lisbon.
- [B88] Cordaro, L., Zuin, M., Momo, B., Martinez, E., Spolaore, M., Auriemma, F., Cavazzana, R., De Masi, G., Scarin, P., Spagnolo, S., **Vianello, N.**, Cester, D., Stevanato, L., Isliker, H., Vlahos, L., and Schneider, W. (2016) “*Current sheet fragmentation following magnetic reconnection in RFP plasmas*”, in: *43rd EPS Conference on Plasma Physics*, pp.P5.015, Leuven, Belgium.
- [B89] Refy, D., Solano, E. R., **Vianello, N.**, Zoletnik, S., Dunai, D., Tal, B., Brix, M., Gomes, R., Birkenmeier, G., Wolfrum, E., Laggner, F., and Delabie, E. (2016) “*Comparative analysis of density profile and magnetic signals during the JET M-mode and ASDEX Upgrade I-phase phenomena*”, in: *43rd EPS Conference on Plasma Physics*, pp.P1.023, Leuven, Belgium.
- [B90] **Vianello, N.**, Tsui, C. K., Theiler, C., Allan, S., Boedo, J. A., Labit, B., Reimerdes, H., Verhaegh, K., Vijvers, W., Walkden, N., Costea, S., Kovacic, J., Ionita, C., Naulin, V., Nielsen, A. H., Rasmussen, J. J., Schneider, B. S., Schrittwieser, R., Spolaore, M., Carralero, D., Madsen, J., Militello, F., and Lipschultz, B. (2016) “*On Filamentary Transport in the TCV Tokamak: Addressing the role of Parallel Connection Length*”, in: *26th IAEA Fusion Energy Conference*, pp.EX-P8-26, Kyoto.
- [B91] Tsui, C. K., Boedo, J. A., Myra, J. R., **Vianello, N.**, Duval, B., Labit, B., Reimerdes, H., Sheikh, U., Theiler, C., and Verhaegh, K. (2017) “*Filamentary Transport Scaling Validation across Multiple Theoretical Regimes in the TCV Tokamak*”, in: *44th EPS Conference on Plasma Physics*, pp.P1.176, Belfast, UK.
- [B92] Verhaegh, K., Lipschultz, B., Duval, B. P., Harrison, J., Labit, B., Lomanowski, B., Maurizio, R., Marini, C., Reimerdes, H., Sheikh, U., Theiler, C., Tsui, C. K., **Vianello, N.**, and Vijvers, W. A. J. (2017) “*Spectroscopic investigation of ion sinks/sources during TCV detachment*”, in: *44th EPS Conference on Plasma Physics*, pp.P4.123, Belfast, UK.

First author oral contribution

- [C1] **Vianello, N.**, Antoni, V., Carbone, V., Bergsaker, R., Martinez, E., Regnoli, G., Serianni, G., Spada, E., and Spolaore, M. (2002) Intermittency and fluctuations in edge plasma turbulence presented at 7th Easter Plasma Meeting, Turin, Italy.
- [C2] **Vianello, N.**, Antoni, V., Spada, E., Spolaore, M., Serianni, G., Regnoli, G., Zuin, M., Cavazzana, R., Bersaker, H., Cecconello, M., and Drake, J. R. (2004) Sheared $E \times B$ flow and plasma turbulence viscosity in a Reversed Field Pinch presented at the 46th APS DPP Conference, Savannah, GA, USA.
- [C3] **Vianello, N.**, Spada, E., Antoni, V., Bersaker, H., Spolaore, M., Serianni, G., Regnoli, G., Cavazzana, R., and Drake, J. R. (2004) Dynamical self-organisation process between turbulence and plasma flow in a Reversed Field Pinch configuration presented at the 10th EU-US Transport Task Force Workshop, Varenna, Italy.
- [C4] **Vianello, N.**, Spada, E., Antoni, V., Spolaore, M., Serianni, G., Regnoli, G., Bergsaker, H., and Drake, J. R. (2004) Fluctuations and velocity profile self regulation in a Reversed Field Pinch Plasma presented at the 10th IEA/RFP Workshop, Padova, Italy.
- [C5] **Vianello, N.**, Agostini, M., Cavazzana, R., Serianni, G., and Scarin, P. (2005) Experimental characterization of edge turbulence with GPID in RFX-mod presented at the 11th IEA/RFP Workshop, Madison, USA.
- [C6] **Vianello, N.**, Antoni, V., Spada, E., Bersaker, H., Spolaore, M., Cavazzana, R., Serianni, G., Cecconello, M., and Drake, J. R. (2005) Turbulent energy transfer in electromagnetic turbulence: hints from a Reversed Field Pinch plasma presented at the 8th International Workshop on the Interrelationship between Plasma Experiments in Laboratory and Space, Tromsø, Norway.
- [C7] **Vianello, N.**, Antoni, V., Spada, E., Spolaore, M., Cavazzana, R., Serianni, G., Bersaker, H., Cecconello, M., and Drake, J. R. (2005) Turbulent self regulation process in the edge region of an RFP plasma presented at the 11th IEA/RFP Workshop, Madison, USA.

- [C8] **Vianello, N.**, Spada, E., Cavazzana, E., Martines, E., Serianni, G., Spolaore, M., Zuin, M., and Antoni, V. (2007) Energy balance including turbulence effects in Reversed Field Pinch plasmas presented at the 12th EU-US TTF Workshop, San Diego, USA.
- [C9] **Vianello, N.**, Agostini, M., Fassina, A., Canton, A., Lorenzini, R., Alfier, A., Cavazzana, R., Martines, E., Scarin, P., Serianni, G., Spizzo, G., Spolaore, M., and Zuin, M. (2008) Turbulence, transport and their relation with the magnetic boundary in the RFX-mod device presented at the 35th EPS Conference, Hersonissos, Greece.
- [C10] **Vianello, N.**, Spolaore, M., Agostini, M., Cavazzana, R., Martines, E., Scarin, P., Serianni, G., Spada, E., Zuin, M., and Antoni, V. (2008) Current filaments and electrostatic structures measured in the edge region of the RFX-mod experiment presented at the 13rd IEA/RFP Workshop, Stockholm, Sweden.
- [C11] **Vianello, N.**, Spolaore, M., Agostini, M., Cavazzana, R., Martines, E., Scarin, P., Serianni, G., Spada, E., Zuin, M., and Antoni, V. (2008) Magnetic and electrostatic structures measured in the edge region of the RFX-mod experiment presented at the EFTSOMP2008, Hersonissos, Greece.
- [C12] **Vianello, N.**, Naulin, V., Schrittwieser, R., Müller, H. W., Zuin, M., Ionita, C., Mehlmann, F., Rasmussen, J. J., Rhode, V., Cavazzana, R., Marashek, M., Maszl, C., and Scaggion, A. (2009) Characterization of type I ELMS on ASDEX Upgrade using magnetic signals presented at the 2nd EFDA TTG Workshop, Culham, UK.
- [C13] **Vianello, N.**, Spolaore, M., Martines, E., Agostini, M., Cavazzana, R., Scarin, P., Serianni, G., Spada, E., and Zuin, M. (2009) Current filaments structures in the edge region of the RFX-mod device presented at the 2nd EFDA TTG Workshop, Culham, UK.
- [C14] **Vianello, N.**, Spolaore, M., Martines, E., Cavazzana, R., Serianni, G., Spada, E., and Zuin, M. (2009) Current filaments detected in the edge region of a magnetically confined plasmas presented at the Workshop on the Cross-scale coupling in Plasmas, Cosenza, Italy.
- [C15] **Vianello, N.**, Agostini, M., Cavazzana, R., De Masi, G., Martines, E., Scarin, P., Spizzo, G., Spolaore, M., and Zuin, M. (2011) Plasma boundary in RFX-mod: topology, flow and transport presented at 15th IEA/RFP Workshop, Madison.
- [C16] **Vianello, N.**, Agostini, M., Carralero, D., Cavazzana, R., De Masi, G., Furno, I., Ionita, C., Hidalgo, C., Martines, E., Momo, B., Müller, H. W., Naulin, V., Rasmussen, J. J., Scaggion, A., Scarin, P., Spagnolo, S., Schrittwieser, R., Spizzo, G., Spolaore, M., Theiler, C., and Zuin, M. (2012) The role of 3D fields on edge and SOL turbulence invited lecture at the EFTSOMP2012 workshop, Stockholm, Sweden.
- [C17] **Vianello, N.**, Spizzo, G., Agostini, M., Scarin, P., Carraro, L., Cavazzana, R., Giaccio, G., De Masi, G., Martines, E., Momo, B., Rea, C., Spagnolo, S., Spolaore, M., and Zuin, M. (2013) 3D Effects on the helical boundary of RFX-mod presented at 6th International Workshop on Stochasticity in Fusion Plasmas, Jülich, Germany.
- [C18] **Vianello, N.**, Agostini, M., Carraro, L., Cavazzana, R., De Masi, G., Innocente, P., Marrelli, L., Martines, E., Mazzi, A., Momo, B., Puiatti, M. E., Rea, C., Spizzo, G., Scarin, P., Spolaore, M., Terranova, D., Zanca, P., and M. Z. (2014) Magnetic perturbation as a viable tool for edge flow and turbulence modifications invited talk at 41st EPS conference on Plasma Physics, Berlin.