

Edilberto SÃ¡nchez

List of Publications by Year in descending order

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109
papers

3,290
citations

201674

27
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161849

54
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111
all docs

111
docs citations

111
times ranked

1585
citing authors

#	ARTICLE	IF	CITATIONS
1	Wavelet bicoherence: A new turbulence analysis tool. <i>Physics of Plasmas</i> , 1995, 2, 3017-3032.	1.9	308
2	Overview of first Wendelstein 7-X high-performance operation. <i>Nuclear Fusion</i> , 2019, 59, 112004.	3.5	165
3	Long-Range Time Correlations in Plasma Edge Turbulence. <i>Physical Review Letters</i> , 1998, 80, 4438-4441.	7.8	143
4	Nonlinear Phenomena and Intermittency in Plasma Turbulence. <i>Physical Review Letters</i> , 1995, 74, 395-398.	7.8	142
5	Fluctuation-induced flux at the plasma edge in toroidal devices. <i>Physics of Plasmas</i> , 1996, 3, 2664-2672.	1.9	139
6	Self-similarity of the plasma edge fluctuations. <i>Physics of Plasmas</i> , 1998, 5, 3632-3643.	1.9	132
7	In Search of the Elusive Zonal Flow Using Cross-Bicoherence Analysis. <i>Physical Review Letters</i> , 2000, 84, 4842-4845.	7.8	126
8	Self-Similarity Properties of the Probability Distribution Function of Turbulence-Induced Particle Fluxes at the Plasma Edge. <i>Physical Review Letters</i> , 1999, 83, 3653-3656.	7.8	117
9	First plasmas in the TJ-II flexible Helic. <i>Plasma Physics and Controlled Fusion</i> , 1999, 41, A539-A548.	2.1	109
10	Radial Structure of Reynolds Stress in the Plasma Boundary of Tokamak Plasmas. <i>Physical Review Letters</i> , 1999, 83, 2203-2205.	7.8	91
11	Statistical characterization of fluctuation wave forms in the boundary region of fusion and nonfusion plasmas. <i>Physics of Plasmas</i> , 2000, 7, 1408-1416.	1.9	84
12	Performance of Wendelstein 7-X stellarator plasmas during the first divertor operation phase. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	83
13	Empirical Similarity of Frequency Spectra of the Edge-Plasma Fluctuations in Toroidal Magnetic-Confinement Systems. <i>Physical Review Letters</i> , 1999, 82, 3621-3624.	7.8	77
14	Confinement transitions in TJ-II under Li-coated wall conditions. <i>Nuclear Fusion</i> , 2009, 49, 104018.	3.5	75
15	Generation of sheared poloidal flows via Reynolds stress and transport barrier physics. <i>Plasma Physics and Controlled Fusion</i> , 2000, 42, A153-A160.	2.1	71
16	Demonstration of reduced neoclassical energy transport in Wendelstein 7-X. <i>Nature</i> , 2021, 596, 221-226.	27.8	69
17	Intermittency of plasma edge fluctuation data: Multifractal analysis. <i>Physics of Plasmas</i> , 2000, 7, 3278-3287.	1.9	68
18	Enhanced heat confinement in the flexible heliac TJ-II. <i>Nuclear Fusion</i> , 2002, 42, 271-280.	3.5	59

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19	Experimental evidence of long-range correlations and self-similarity in plasma fluctuations. <i>Physics of Plasmas</i> , 1999, 6, 1885-1892.	1.9	57
20	Experimental evidence of three-wave coupling on plasma turbulence. <i>Physical Review Letters</i> , 1993, 71, 3127-3130.	7.8	47
21	Role of Turbulence on Edge Momentum Redistribution in the TJ-II Stellarator. <i>Physical Review Letters</i> , 2006, 96, 145001.	7.8	47
22	Statistically robust linear and nonlinear wavelet analysis applied to plasma edge turbulence. <i>Review of Scientific Instruments</i> , 1997, 68, 967-970.	1.3	44
23	Overview of TJ-II experiments. <i>Nuclear Fusion</i> , 2005, 45, S266-S275.	3.5	37
24	Fast movable remotely controlled Langmuir probe system. <i>Review of Scientific Instruments</i> , 1999, 70, 415-418.	1.3	35
25	Confinement and stability on the TJ-II stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2002, 44, B307-B322.	2.1	30
26	Magnetic configuration and plasma parameter dependence of the energy confinement time in ECR heated plasmas from the TJ-II stellarator. <i>Nuclear Fusion</i> , 2005, 45, 276-284.	3.5	30
27	Characterization of the frequency ranges of the plasma edge fluctuation spectra. <i>Physics of Plasmas</i> , 1999, 6, 4615-4621.	1.9	29
28	On the energy transfer between flows and turbulence in the plasma boundary of fusion devices. <i>Journal of Nuclear Materials</i> , 2005, 337-339, 296-300.	2.7	27
29	On the radial scale of fluctuations in the TJ-II stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2001, 43, A313-A321.	2.1	25
30	Physics of sheared flow development in the boundary of fusion plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2006, 48, S169-S176.	2.1	25
31	Overview of TJ-II experiments. <i>Nuclear Fusion</i> , 2011, 51, 094022.	3.5	24
32	Residual zonal flows in tokamaks and stellarators at arbitrary wavelengths. <i>Plasma Physics and Controlled Fusion</i> , 2016, 58, 045018.	2.1	23
33	Review of confinement and transport studies in the TJ-II flexible heliac. <i>Nuclear Fusion</i> , 2001, 41, 1449-1457.	3.5	22
34	Up-Down and In-Out Asymmetry Monitoring Based on Broadband Radiation Detectors. <i>Fusion Science and Technology</i> , 2006, 50, 313-319.	1.1	22
35	Data mining technique for fast retrieval of similar waveforms in Fusion massive databases. <i>Fusion Engineering and Design</i> , 2008, 83, 132-139.	1.9	20
36	Collisionless damping of flows in the TJ-II stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 014015.	2.1	20

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37	Observation of Oscillatory Radial Electric Field Relaxation in a Helical Plasma. <i>Physical Review Letters</i> , 2017, 118, 185002.	7.8	20
38	Turbulence and perpendicular plasma flow asymmetries measured at TJ-II plasmas. <i>Nuclear Fusion</i> , 2019, 59, 076021.	3.5	19
39	Confinement studies in the TJ-II stellarator. <i>Plasma Physics and Controlled Fusion</i> , 1999, 41, B109-B117.	2.1	18
40	Limit cycle oscillations at the L ^H transition in TJ-II plasmas: triggering, temporal ordering and radial propagation. <i>Nuclear Fusion</i> , 2015, 55, 063005.	3.5	18
41	Nonlinear gyrokinetic PIC simulations in stellarators with the code EUTERPE. <i>Journal of Plasma Physics</i> , 2020, 86, .	2.1	18
42	Radial electric field and density fluctuations measured by Doppler reflectometry during the post-pellet enhanced confinement phase in W7-X. <i>Nuclear Fusion</i> , 2021, 61, 046008.	3.5	18
43	Distributed real time data processing architecture for the TJ-II data acquisition system. <i>Review of Scientific Instruments</i> , 2004, 75, 4261-4264.	1.3	17
44	Enhanced energy confinement after series of pellets in Wendelstein 7-X. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 055012.	2.1	17
45	Magnetic well and instability thresholds in the TJ-II stellarator. <i>Physics of Plasmas</i> , 2002, 9, 713-716.	1.9	16
46	High resolution CO ₂ interferometry on the TJ-II stellarator by using an ADC-based phase meter. <i>Review of Scientific Instruments</i> , 2004, 75, 3414-3416.	1.3	16
47	3D effects on transport and plasma control in the TJ-II stellarator. <i>Nuclear Fusion</i> , 2017, 57, 102022.	3.5	16
48	Validation of global gyrokinetic simulations in stellarator configurations. <i>Nuclear Fusion</i> , 2019, 59, 076029.	3.5	16
49	Turbulent impurity transport simulations in Wendelstein 7-X plasmas. <i>Journal of Plasma Physics</i> , 2021, 87, .	2.1	16
50	Encoding technique for high data compaction in data bases of fusion devices. <i>Review of Scientific Instruments</i> , 1996, 67, 4154-4160.	1.3	15
51	Controlling confinement with induced toroidal current in the flexible Helic TJ-II. <i>Nuclear Fusion</i> , 2003, 43, 387-392.	3.5	15
52	Overview of the TJ-II remote participation system. <i>Fusion Engineering and Design</i> , 2006, 81, 2045-2050.	1.9	15
53	Data management in the TJ-II multi-layer database. <i>Fusion Engineering and Design</i> , 2000, 48, 69-75.	1.9	14
54	Damping of radial electric field fluctuations in the TJ-II stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 124044.	2.1	14

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55	On-surface potential and radial electric field variations in electron root stellarator plasmas. Plasma Physics and Controlled Fusion, 2018, 60, 104002.	2.1	14
56	Experimental investigation of dynamical coupling between density gradients, radial electric fields and turbulent transport in the JET plasma boundary region. Nuclear Fusion, 2002, 42, 1205-1209.	3.5	13
57	Electron Internal Transport Barriers and Magnetic Topology in the Stellarator TJ-II. Fusion Science and Technology, 2006, 50, 127-135.	1.1	13
58	The use of the biorthogonal decomposition for the identification of zonal flows at TJ-II. Plasma Physics and Controlled Fusion, 2015, 57, 025005.	2.1	13
59	Particle transport after pellet injection in the TJ-II stellarator. Plasma Physics and Controlled Fusion, 2016, 58, 084004.	2.1	13
60	Semianalytical calculation of the zonal-flow oscillation frequency in stellarators. Plasma Physics and Controlled Fusion, 2017, 59, 065005.	2.1	13
61	An experimental characterization of core turbulence regimes in Wendelstein 7-X. Nuclear Fusion, 0, , .	3.5	13
62	The TJ-II data acquisition system: an overview. Fusion Engineering and Design, 1999, 43, 309-319.	1.9	12
63	Overview of recent TJ-II stellarator results. Nuclear Fusion, 2019, 59, 112019.	3.5	12
64	A model for the fast evaluation of prompt losses of energetic ions in stellarators. Nuclear Fusion, 2021, 61, 116059.	3.5	12
65	Accessing TJ-II data with remote procedure call. Review of Scientific Instruments, 2001, 72, 525-529.	1.3	11
66	Overview of TJ-II flexible heliac results. Fusion Engineering and Design, 2001, 56-57, 145-154.	1.9	11
67	Software and hardware developments for remote participation in TJ-II operation. Proof of concept using the NPA diagnostic. Fusion Engineering and Design, 2002, 60, 487-492.	1.9	9
68	Design of the TJ-II remote participation system. Review of Scientific Instruments, 2003, 74, 1773-1777.	1.3	9
69	Autonomous acquisition systems for TJ-II: controlling instrumentation with a fourth generation language. Fusion Engineering and Design, 2004, 71, 123-127.	1.9	9
70	Overview of TJ-II experiments. Nuclear Fusion, 2007, 47, S677-S685.	3.5	9
71	Transport, stability and plasma control studies in the TJ-II stellarator. Nuclear Fusion, 2015, 55, 104014.	3.5	9
72	Overview of the TJ-II stellarator research programme towards model validation in fusion plasmas. Nuclear Fusion, 2022, 62, 042025.	3.5	9

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73	Multiprocessor architecture to handle TJ-II VXI-based digitization channels. Review of Scientific Instruments, 1999, 70, 513-516.	1.3	8
74	Applying object oriented concepts to on-line data acquisition. Review of Scientific Instruments, 1999, 70, 517-520.	1.3	8
75	Role of rational surfaces on fluctuations and transport in the plasma edge of the TJ-II stellarator. European Physical Journal D, 2000, 50, 1463-1470.	0.4	8
76	A distributed synchronization system for the TJ-II local area network. Fusion Engineering and Design, 2004, 71, 117-121.	1.9	8
77	Oscillatory relaxation of zonal flows in a multi-species stellarator plasma. Plasma Physics and Controlled Fusion, 2018, 60, 094003.	2.1	8
78	Multi-tier approach for data acquisition programming in the TJ-II remote participation system. Review of Scientific Instruments, 2004, 75, 4251-4253.	1.3	7
79	Applying a message oriented middleware architecture to the TJ-II remote participation system. Fusion Engineering and Design, 2006, 81, 2063-2067.	1.9	7
80	A standard data access layer for fusion devices R&D programs. Fusion Engineering and Design, 2007, 82, 1315-1320.	1.9	7
81	Comparison of local and global gyrokinetic calculations of collisionless zonal flow damping in quasi-symmetric stellarators. Physics of Plasmas, 2021, 28, .	1.9	7
82	Turbulent transport of impurities in 3D devices. Nuclear Fusion, 2021, 61, 116019.	3.5	7
83	Gyrokinetic simulations in stellarators using different computational domains. Nuclear Fusion, 2021, 61, 116074.	3.5	7
84	Results of the remote participation on TJ-II neutral particle analyzer. Review of Scientific Instruments, 2003, 74, 1795-1798.	1.3	6
85	TJ-II Operation Tracking from Cadarache. Fusion Science and Technology, 2006, 50, 464-471.	1.1	6
86	Measurement of Fluctuation Induced Flow by Multiple Langmuir Probes in the TJ-II Torsatron. Contributions To Plasma Physics, 1998, 38, 93-97.	1.1	5
87	Data processing in fusion experiments with remote participation. Review of Scientific Instruments, 2003, 74, 1791-1794.	1.3	5
88	Real-time data acquisition and processing platform for fusion experiments. Fusion Engineering and Design, 2004, 71, 135-140.	1.9	5
89	Present status of the TJ-II remote participation system. Fusion Engineering and Design, 2005, 74, 775-780.	1.9	5
90	Synchronization resources in heterogeneous environments: Time-sharing, real-time and Java. Fusion Engineering and Design, 2006, 81, 1869-1872.	1.9	5

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91	Improvements of the particle-in-cell code EUTERPE for petascaling machines. Computer Physics Communications, 2011, 182, 2047-2051.	7.5	5
92	Dynamics of flows and confinement in the TJ-II stellarator. Nuclear Fusion, 2013, 53, 104016.	3.5	5
93	TJ-II data retrieving by means of a client/server model. Review of Scientific Instruments, 1999, 70, 498-501.	1.3	4
94	A relational database for physical data from TJ-II discharges. Fusion Engineering and Design, 2002, 60, 341-346.	1.9	4
95	Simulation platform for remote participants in fusion experiments. Fusion Engineering and Design, 2004, 71, 269-274.	1.9	4
96	Real-time lossless data compression techniques for long-pulse operation. Fusion Engineering and Design, 2007, 82, 1301-1307.	1.9	4
97	Linear and Nonlinear Simulations Using the EUTERPE Gyrokinetic Code. IEEE Transactions on Plasma Science, 2010, 38, 2119-2128.	1.3	4
98	Remote launching of plasma modes in the drift frequency range. Plasma Physics and Controlled Fusion, 1997, 39, 367-374.	2.1	2
99	Observation of extended poloidal structures in the turbulent edge plasma of the L-2M stellarator. JETP Letters, 1998, 67, 662-667.	1.4	2
100	Experimental Study of Sheared Poloidal Flows in a Linear Plasma Machine. European Physical Journal D, 2001, 51, 1047-1052.	0.4	2
101	Remote control of data acquisition devices by means of message oriented middleware. Fusion Engineering and Design, 2007, 82, 1365-1371.	1.9	2
102	First experience with particle-in-cell plasma physics code on ARM-based HPC systems. Journal of Physics: Conference Series, 2015, 640, 012064.	0.4	2
103	Nonlinear phenomena and plasma turbulence in fusion plasmas. Physica Scripta, 1995, 51, 624-626.	2.5	1
104	Software architecture of data acquisition control process during TJ-II operation. Review of Scientific Instruments, 1997, 68, 959-962.	1.3	1
105	Transport Properties in the TJ-II Flexible Helic. AIP Conference Proceedings, 2003, , .	0.4	1
106	Particle-in-Cell Algorithms for Plasma Simulations on Heterogeneous Architectures. , 2011, , .		1
107	On the role of density fluctuations in the core turbulent transport of Wendelstein 7-X. Plasma Physics and Controlled Fusion, 0, , .	2.1	1
108	Development of a synthetic phase contrast imaging diagnostic for turbulence studies at Wendelstein 7-X. Plasma Physics and Controlled Fusion, 2022, 64, 095011.	2.1	1

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109	An event-oriented database for continuous data flows in the TJ-II environment. Fusion Engineering and Design, 2008, 83, 413-416.	1.9	0