Lorenzo Frassinetti

List of Publications by Year
in descending order

137 papers	3,343 citations	126907 33 h-index	197818 49 g-index
138 all docs	138 docs citations	138 times ranked	1841 citing authors

#	Article	IF	Citations
1	DIII-D research advancing the physics basis for optimizing the tokamak approach to fusion energy. Nuclear Fusion, 2022, 62, 042024.	3.5	11
2	The dependence of confinement on the isotope mass in the core and the edge of AUG and JET-ILW H-mode plasmas. Nuclear Fusion, 2022, 62, 026014.	3.5	10
3	Recent progress in Lâ€“H transition studies at JET: tritium, helium, hydrogen and deuterium. Nuclear Fusion, 2022, 62, 076026.	3.5	15
4	Experimental study on the role of the target electron temperature as a key parameter linking recycling to plasma performance in JET-ILW*. Nuclear Fusion, 2022, 62, 066030.	3.5	11
5	Overview of the TCV tokamak experimental programme. Nuclear Fusion, 2022, 62, 042018.	3.5	30
6	A survey of pedestal magnetic fluctuations using gyrokinetics and a global reduced model for microtearing stability. Physics of Plasmas, 2022, 29, .	1.9	7
7	The role of ETG modes in JETâ€“ILW pedestals with varying levels of power and fuelling. Nuclear Fusion, 2022, 62, 086028.	3.5	20
8	Enabling adaptive pedestals in predictive transport simulations using neural networks. Nuclear Fusion, 2022, 62, 096006.	3.5	2
9	Microtearing modes as the source of magnetic fluctuations in the JET pedestal. Nuclear Fusion, 2021, 61, 036015.	3.5	32
10	Impact of the new TCV baffled divertor upgrade on pedestal structure and performance. Nuclear Materials and Energy, 2021, 26, 100933.	1.3	4
11	Isotope dependence of the type I ELMy H-mode pedestal in JET-ILW hydrogen and deuterium plasmas. Nuclear Fusion, 2021, 61, 046015.	3.5	11
12	First principle-based multi-channel integrated modelling in support of the designÂof the Divertor Tokamak Test facility. Nuclear Fusion, 2021, 61, 116068.	3.5	25
13	Role of the separatrix density in the pedestal performance in deuterium low triangularity JET-ILW plasmas and comparison with JET-C. Nuclear Fusion, 2021, 61, 126054.	3.5	24
14	Change in the pedestal stability between JET-C and JET-ILW low triangularity peeling-ballooning limited plasmas. Nuclear Fusion, 2021, 61, 026008.	3.5	9
15	Pedestal structure, stability and scalings in JET-ILW: the EUROfusion JET-ILW pedestal database. Nuclear Fusion, 2021, 61, 016001.	3.5	27
16	Isotope dependence of energy, momentum and particle confinement in tokamaks. Journal of Plasma Physics, 2020, 86, .	2.1	25
17	Predictive multi-channel flux-driven modelling to optimise ICRH tungsten control and fusion performance in JET. Nuclear Fusion, 2020, 60, 066029.	3.5	45
18	The dependence of exhaust power components on edge gradients in JET-C and JET-ILW H-mode plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 055010.	2.1	10

#	Article	IF	Citations
19	Overview of physics studies on ASDEX Upgrade. Nuclear Fusion, 2019, 59, 112014.	3.5	38
20	Role of the pedestal position on the pedestal performance in AUG, JET-ILW and TCV and implications for ITER. Nuclear Fusion, 2019, 59, 076038.	3.5	43
21	Effect of poloidal phasing on ion cyclotron resonance heating power absorption. Nuclear Fusion, 2019, 59, 076022.	3.5	8
22	Control of the hydrogen:deuterium isotope mixture using pellets in JET. Nuclear Fusion, 2019, 59, 106047.	3.5	6
23	Self-consistent pedestal prediction for JET-ILW in preparation of the DT campaign. Physics of Plasmas, 2019, 26, .	1.9	26
24	Physics research on the TCV tokamak facility: from conventional to alternative scenarios and beyond. Nuclear Fusion, 2019, 59, 112023.	3.5	43
25	Dependence on plasma shape and plasma fueling for small edge-localized mode regimes in TCV and ASDEX Upgrade. Nuclear Fusion, 2019, 59, 086020.	3.5	34
26	Scenario development for Dâ€“T operation at JET. Nuclear Fusion, 2019, 59, 076037.	3.5	46
27	Long-lived coupled peeling ballooning modes preceding ELMs on JET. Nuclear Fusion, 2019, 59, 056004.	3.5	11
28	Pedestal structure and energy confinement studies on TCV. Plasma Physics and Controlled Fusion, 2019, 61, 014002.	2.1	19
29	Insights into typeâ€I edge localized modes and edge localized mode control from JOREK nonâ€linear magnetoâ€hydrodynamic simulations. Contributions To Plasma Physics, 2018, 58, 518-528.	1.1	16
30	Analysis of ELM stability with extended MHD models in JET, JT-60U and future JT-60SA tokamak plasmas. Plasma Physics and Controlled Fusion, 2018, 60, 014032.	2.1	17
31	Pedestal evolution physics in low triangularity JET tokamak discharges with ITER-like wall. Nuclear Fusion, 2018, 58, 016021.	3.5	14
32	Effect of the relative shift between the electron density and temperature pedestal position on the pedestal stability in JET-ILW and comparison with JET-C. Nuclear Fusion, 2018, 58, 056010.	3.5	38
33	Inter-ELM evolution of the edge current density in JET-ILW type I ELMy H-mode plasmas. Plasma Physics and Controlled Fusion, 2018, 60, 085003.	2.1	4
34	Dependence of Perpendicular Viscosity on Magnetic Fluctuations in a Stochastic Topology. Physical Review Letters, 2018, 120, 225002.	7.8	9
35	Integrated modelling of H-mode pedestal and confinement in JET-ILW. Plasma Physics and Controlled Fusion, 2018, 60, 014042.	2.1	40
36	Recent progress in the quantitative validation of JOREK simulations of ELMs in JET. Nuclear Fusion, 2017, 57, 076006.	3.5	25

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37	Impact of the JET ITER-like wall on H-mode plasma fueling. Nuclear Fusion, 2017, 57, 066024.	3.5	6
38	Contribution to the multi-machine pedestal scaling from the COMPASS tokamak. Nuclear Fusion, 2017, 57, 056041.	3.5	6
39	ELM behavior in ASDEX Upgrade with and without nitrogen seeding. Nuclear Fusion, 2017, 57, 022004.	3.5	10
40	Global performance enhancements via pedestal optimisation on ASDEX Upgrade. Plasma Physics and Controlled Fusion, 2017, 59, 025010.	2.1	36
41	Global and pedestal confinement and pedestal structure in dimensionless collisionality scans of low-triangularity H-mode plasmas in JET-ILW. Nuclear Fusion, 2017, 57, 016012.	3.5	22
42	Overview of progress in European medium sized tokamaks towards an integrated plasma-edge/wall solution ^a. Nuclear Fusion, 2017, 57, 102014.	3.5	23
43	Numerical analysis of ELM stability with rotation and ion diamagnetic drift effects in JET. Nuclear Fusion, 2017, 57, 126001.	3.5	11
44	Studies of the pedestal structure and inter-ELM pedestal evolution in JET with the ITER-like wall. Nuclear Fusion, 2017, 57, 116012.	3.5	30
45	Impact of wall materials and seeding gases on the pedestal and on core plasma performance. Nuclear Materials and Energy, 2017, 12, 18-27.	1.3	36
46	Impact of divertor geometry on H-mode confinement in the JET metallic wall. Nuclear Fusion, 2017, 57, 086025.	3.5	24
47	Gray-box modeling of resistive wall modes with vacuum-plasma separation and optimal control design for EXTRAP T2R. Fusion Engineering and Design, 2017, 121, 245-255.	1.9	2
48	The role of the density profile in the ASDEX-Upgrade pedestal structure. Plasma Physics and Controlled Fusion, 2017, 59, 014017.	2.1	69
49	Intra-ELM tungsten sputtering in JET ITER-like wall: analytical studies of Be impurity and ELM type influence. Physica Scripta, 2017, T170, 014065.	2.5	3
50	Dimensionless scalings of confinement, heat transport and pedestal stability in JET-ILW and comparison with JET-C. Plasma Physics and Controlled Fusion, 2017, 59, 014014.	2.1	26
51	Impact of toroidal and poloidal mode spectra on the control of non-axisymmetric fields in tokamaks. Physics of Plasmas, 2017, 24, .	1.9	19
52	Overview of the TCV tokamak program: scientific progress and facility upgrades. Nuclear Fusion, 2017, 57, 102011.	3.5	52
53	Edge profile analysis of Joint European Torus (JET) Thomson scattering data: Quantifying the systematic error due to edge localised mode synchronisation. Review of Scientific Instruments, 2016, 87, 013507.	1.3	7
54	Tearing mode dynamics and locking in the presence of external magnetic perturbations. Physics of Plasmas, 2016, 23, .	1.9	4

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55	Local measurement of error field using naturally rotating tearing mode dynamics in EXTRAP T2R. Plasma Physics and Controlled Fusion, 2016, 58, 124001.	2.1	2
56	Development of the Qâ€‰â€‰=â€‰â€‰10 scenario for ITER on ASDEX Upgrade (AUG). Nuclear Fusion, 2016, 56, 106007.	3.5	17
57	The role of carbon and nitrogen on the H-mode confinement in ASDEX Upgrade with a metal wall. Nuclear Fusion, 2016, 56, 056014.	3.5	19
58	Improved model predictive control of resistive wall modes by error field estimator in EXTRAP T2R. Plasma Physics and Controlled Fusion, 2016, 58, 124002.	2.1	4
59	Non-linear MHD simulations of ELMs in JET and quantitative comparisons to experiments. Plasma Physics and Controlled Fusion, 2016, 58, 014026.	2.1	20
60	Braking due to non-resonant magnetic perturbations and comparison with neoclassical toroidal viscosity torque in EXTRAP T2R. Nuclear Fusion, 2015, 55, 112003.	3.5	15
61	Pedestal confinement and stability in JET-ILW ELMy H-modes. Nuclear Fusion, 2015, 55, 113031.	3.5	82
62	Implementation of model predictive control for resistive wall mode stabilization on EXTRAP T2R. Plasma Physics and Controlled Fusion, 2015, 57, 104005.	2.1	10
63	Studies of the non-axisymmetric plasma boundary displacement in JET in presence of externally applied magnetic field. Plasma Physics and Controlled Fusion, 2015, 57, 104003.	2.1	2
64	ELM control at the L â†' H transition by means of pellet pacing in the ASDEX Upgrade and JET all-metal-wall tokamaks. Plasma Physics and Controlled Fusion, 2015, 57, 045011.	2.1	9
65	Design and operation of fast model predictive controller for stabilization of magnetohydrodynamic modes in a fusion device. , 2015, , .		2
66	The H-mode pedestal structure and its role on confinement in JET with a carbon and metal wall. Nuclear Fusion, 2015, 55, 013019.	3.5	43
67	Effect of nitrogen seeding on the energy losses and on the time scales of the electron temperature and density collapse of type-I ELMs in JET with the ITER-like wall. Nuclear Fusion, 2015, 55, 023007.	3.5	16
68	ELM induced tungsten melting and its impact on tokamak operation. Journal of Nuclear Materials, 2015, 463, 78-84.	2.7	53
69	Investigation of the influence of divertor recycling on global plasma confinement in JET ITER-like wall. Journal of Nuclear Materials, 2015, 463, 450-454.	2.7	18
70	ELM-induced transient tungsten melting in the JET divertor. Nuclear Fusion, 2015, 55, 023010.	3.5	83
71	Progress at JET in integrating ITER-relevant core and edge plasmas within the constraints of an ITER-like wall. Plasma Physics and Controlled Fusion, 2015, 57, 035004.	2.1	64
72	Improved confinement in JET highÎ²plasmas with an ITER-like wall. Nuclear Fusion, 2015, 55, 053031.	3.5	79

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73	Physics of Plasmas, 2015, 22, 056115.	1.9	37
74	Thermal analysis of an exposed tungsten edge in the JET divertor. Journal of Nuclear Materials, 2015, 463, 415-419.	2.7	14
75	Overview of the RFX-mod contribution to the international Fusion Science Program. Nuclear Fusion, 2015, 55, 104012.	3.5	18
76	Hysteresis in the tearing mode locking/unlocking due to resonant magnetic perturbations in EXTRAP T2R. Plasma Physics and Controlled Fusion, 2015, 57, 104008.	2.1	7
77	Contrasting H-mode behaviour with deuterium fuelling and nitrogen seeding in the all-carbon and metallic versions of JET. Nuclear Fusion, 2014, 54, 073016.	3.5	37
78	First scenario development with the JET new ITER-like wall. Nuclear Fusion, 2014, 54, 013011.	3.5	59
79	Numerical evaluation of heat flux and surface temperature on a misaligned JET divertor W lamella during ELMs. Nuclear Fusion, 2014, 54, 123011.	3.5	26
80	Transport asymmetry and release mechanisms of metal dust in the reversed-field pinch configuration. Plasma Physics and Controlled Fusion, 2014, 56, 035014.	2.1	4
81	Global and pedestal confinement in JET with a Be/W metallic wall. Nuclear Fusion, 2014, 54, 043001.	3.5	47
82	Edge Thomson scattering diagnostic on COMPASS tokamak: Installation, calibration, operation, improvements. Review of Scientific Instruments, 2014, 85, 11E431.	1.3	14
83	The tearing mode lockingâ€“unlocking mechanism to an external resonant field in EXTRAP T2R. Plasma Physics and Controlled Fusion, 2014, 56, 104001.	2.1	13
84	First operation with the JET International Thermonuclear Experimental Reactor-like wall. Physics of Plasmas, 2013, 20, .	1.9	56
85	Impact of nitrogen seeding on confinement and power load control of a high-triangularity JET ELMy H-mode plasma with a metal wall. Nuclear Fusion, 2013, 53, 113025.	3.5	118
86	Error field assessment from driven rotation of stable external kinks at EXTRAP-T2R reversed field pinch. Nuclear Fusion, 2013, 53, 043018.	3.5	16
87	MHD and gyro-kinetic stability of JET pedestals. Nuclear Fusion, 2013, 53, 123012.	3.5	52
88	Overview of the RFX-mod fusion science programme. Nuclear Fusion, 2013, 53, 104018.	3.5	17
89	Pedestal study across a deuterium fuelling scan for highÎ´ELMy H-mode plasmas on JET with the carbon wall. Nuclear Fusion, 2013, 53, 083028.	3.5	29
90	Plasma density and temperature evolution following the H-mode transition at JET and implications for ITER. Nuclear Fusion, 2013, 53, 083031.	3.5	27

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91	Comparison of hybrid and baseline ELMy H-mode confinement in JET with the carbon wall. Nuclear Fusion, 2013, 53, 013001.	3.5	25
92	Mitigation of type-I ELMs withn= 2 fields on JET with ITER-like wall. Nuclear Fusion, 2013, 53, 073036.	3.5	39
93	The effect of a metal wall on confinement in JET and ASDEX Upgrade. Plasma Physics and Controlled Fusion, 2013, 55, 124043.	2.1	70
94	A method for the estimate of the wall diffusion for non-axisymmetric fields using rotating external fields. Plasma Physics and Controlled Fusion, 2013, 55, 084001.	2.1	3
95	Spatial resolution of the JET Thomson scattering system. Review of Scientific Instruments, 2012, 83, 013506.	1.3	90
96	A first attempt at few coils and low-coverage resistive wall mode stabilization of EXTRAP T2R. Plasma Physics and Controlled Fusion, 2012, 54, 094005.	2.1	6
97	Integration of a radiative divertor for heat load control into JET high triangularity ELMy H-mode plasmas. Nuclear Fusion, 2012, 52, 063022.	3.5	58
98	Tearing mode velocity braking due to resonant magnetic perturbations. Nuclear Fusion, 2012, 52, 103014.	3.5	18
99	A Key to Improved Ion Core Confinement in the JET Tokamak: Ion Stiffness Mitigation due to Combined Plasma Rotation and Low Magnetic Shear. Physical Review Letters, 2011, 107, 135004.	7.8	106
100	ELM size analysis in JET hybrid plasmas. Nuclear Fusion, 2011, 51, 112001.	3.5	1
101	Ion heat transport studies in JET. Plasma Physics and Controlled Fusion, 2011, 53, 124033.	2.1	22
102	Density pump-out compensation during type-I edge localized mode control experiments withn= 1 perturbation fields on JET. Plasma Physics and Controlled Fusion, 2011, 53, 085009.	2.1	6
103	Implementation of advanced feedback control algorithms for controlled resonant magnetic perturbation physics studies on EXTRAP T2R. Nuclear Fusion, 2011, 51, 063018.	3.5	13
104	H-mode pedestal scaling in DIII-D, ASDEX Upgrade, and JET. Physics of Plasmas, 2011, 18, 056120.	1.9	76
105	Resonant magnetic perturbation effect on tearing mode dynamics. Nuclear Fusion, 2010, 50, 035005.	3.5	30
106	Heat transport in the quasi-single-helicity islands of EXTRAP T2R. Physics of Plasmas, 2009, 16, 032503.	1.9	7
107	Experiments and modelling of active quasi-single helicity regime generation in a reversed field pinch. Nuclear Fusion, 2009, 49, 075019.	3.5	13
108	Pedestal width and ELM size identity studies in JET and DIII-D; implications for ITER. Plasma Physics and Controlled Fusion, 2009, 51, 124051.	2.1	44

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109	Heat transport modelling in EXTRAP T2R. Nuclear Fusion, 2009, 49, 025002.	3.5	5
110	Electron temperature profiles in RFX-mod. Plasma Physics and Controlled Fusion, 2008, 50, 035013.	2.1	26
111	Heat diffusivity model and temperature simulations in RFX-mod. Nuclear Fusion, 2008, 48, 045007.	3.5	15
112	Metal impurity fluxes and plasma-surface interactions in EXTRAP T2R. Journal of Physics: Conference Series, 2008, 100, 062030.	0.4	3
113	Frequency Dependence of Fast Magnetic Fluctuations in TPE-RX Reversed-Field Pinch Plasma. Plasma and Fusion Research, 2008, 3, 060-060.	0.7	3
114	Measurement of Fast Magnetic Fluctuations in Edge Region of TPE-RX Reversed-Field Pinch Plasma. Japanese Journal of Applied Physics, 2007, 46, 6831-6833.	1.5	4
115	Cold pulse propagation in a reversed-field pinch. Nuclear Fusion, 2007, 47, 135-145.	3.5	10
116	Resistive wall mode feedback control in EXTRAP T2R with improved steady-state error and transient response. Physics of Plasmas, 2007, 14, 102505.	1.9	16
117	Spontaneous quasi single helicity regimes in EXTRAP T2R reversed-field pinch. Physics of Plasmas, 2007, 14, 112510.	1.9	35
118	Turbulence and particle confinement in a reversed-field pinch plasma. Plasma Physics and Controlled Fusion, 2007, 49, 199-209.	2.1	7
119	A new paradigm for RFP magnetic self-organization: results and challenges. Plasma Physics and Controlled Fusion, 2007, 49, A177-A193.	2.1	45
120	Recent improvements in confinement and beta in the MST reversed-field pinch. Nuclear Fusion, 2007, 47, L17-L20.	3.5	8
121	Tomographic imaging of resistive mode dynamics in the Madison Symmetric Torus reversed-field pinch. Physics of Plasmas, 2006, 13, 012510.	1.9	30
122	Improved Particle Confinement in Transition from Multiple-Helicity to Quasi-Single-Helicity Regimes of a Reversed-Field Pinch. Physical Review Letters, 2006, 97, 175001.	7.8	24
123	Toroidally localized soft x-ray expulsion at the termination of the improved confinement regime in the TPE-RX reversed-field pinch experiment. Physics of Plasmas, 2006, 13, 042502.	1.9	3
124	An empirical scaling law for improved confinement in reversed-field pinch plasmas. Nuclear Fusion, 2005, 45, 138-142.	3.5	10
125	Perturbative transport studies in the reversed-field pinch. Nuclear Fusion, 2005, 45, 1342-1349.	3.5	5
126	Quasi-single helicity state at shallow reversal in TPE-RX reversed-field pinch experiment. Physics of Plasmas, 2005, 12, 112501.	1.9	17

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127	Soft X-ray pulses in the reversed-field pinch. IEEE Transactions on Plasma Science, 2005, 33, 462-463.	1.3	2
128	Overview of results in the MST reversed field pinch experiment. Nuclear Fusion, 2005, 45, S276-S282.	3.5	14
129	Reduced intermittency in the magnetic turbulence of reversed field pinch plasmas. Physics of Plasmas, 2005, 12, 030701.	1.9	14
130	Role of locked mode in the effectiveness of pulsed poloidal current drive regime in the reversed-field pinch. Physics of Plasmas, 2005, 12, 100703.	1.9	5
131	The magnitude of sawtooth crash events in multiple and quasi-single helicity states in a reversed-field-pinch plasma. Physics of Plasmas, 2005, 12, 082507.	1.9	0
132	Performance improvement conditions and their physical origin in the pulsed poloidal current drive regime of the reversed-field pinch device TPE-RX. Physics of Plasmas, 2004, 11, 5229-5238.	1.9	8
133	Overview of quasi-single helicity experiments in reversed field pinches. Nuclear Fusion, 2003, 43, 1855-1862.	3.5	102
134	Analysis and modelling of the magnetic and plasma profiles during PPCD experiments in RFX. Nuclear Fusion, 2003, 43, 1057-1065.	3.5	25
135	Operating Conditions to Achieve High Performance in PPCD in a Reversed-Field Pinch Plasma. Journal of the Physical Society of Japan, 2003, 72, 3297-3298.	1.6	6
136	Towards understanding reactor relevant tokamak pedestals. Nuclear Fusion, 0, , .	3.5	6
137	Understanding JET-C quiescent phases with edge harmonic magnetohydrodynamic activity and comparison with behaviour under ITER-like wall conditioning. Plasma Physics and Controlled Fusion, 0, , .	2.1	0