Roberto Zanino

List of Publications by Year
in descending order

99 papers	1,853 citations	318942 23 h-index	371746 37 g-index
99 all docs	99 docs citations	99 times ranked	894 citing authors

#	Article	IF	Citations
1	SOLPS-ITER simulations of a CPS-based liquid metal divertor for the EU DEMO: Li vs Sn. Nuclear Fusion, 2022, 62, 036008.	1.6	11
2	The DEMO magnet system â€“ Status and future challenges. Fusion Engineering and Design, 2022, 174, 112971.	1.0	37
3	AC Losses in the Second Module of the ITER Central Solenoid. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.1	9
4	Identification of the Postulated Initiating Events of Accidents of a CPS-Based Liquid Metal Divertor for the EU DEMO Fusion Reactor. Fusion Science and Technology, 2022, 78, 186-198.	0.6	0
5	Cross-code comparison of the edge codes SOLPS-ITER, SOLEDGE2D and UEDGE in modelling a low-power scenario in the DTT. Nuclear Fusion, 2022, 62, 056009.	1.6	8
6	DTT: A Challenging Framework for a Sound Superconducting Magnets Design. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.1	4
7	Improved Conceptual Design of the Beamline for the DTT Neutral Beam Injector. IEEE Transactions on Plasma Science, 2022, 50, 4027-4032.	0.6	6
8	Analysis of the Thermal-Hydraulic Effects of a Plasma Disruption on the DTT TF Magnets. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-7.	1.1	8
9	Effect of Local Defects on HTS Fusion Magnets Performance. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-9.	1.1	6
10	Techno-economic optimisation of a sodiumâ€“chloride salt heat exchanger for concentrating solar power applications. Solar Energy, 2022, 239, 252-267.	2.9	7
11	First ITER CS module test results. Fusion Engineering and Design, 2021, 164, 112169.	1.0	12
12	CFD analysis of natural convection cooling of the in-vessel components during a shutdown of the EU DEMO fusion reactor. Fusion Engineering and Design, 2021, 165, 112252.	1.0	5
13	Identification of LOFA precursors in ITER superconducting magnet cryogenic cooling circuit. Reliability Engineering and System Safety, 2021, 209, 107426.	5.1	3
14	Thermal Hydraulic Behavior of the First ITER CS Module. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.1	2
15	AC Losses in the First ITER CS Module Tests: Experimental Results and Comparison to Analytical Models. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.1	11
16	Development of the H4C Model of Quench Propagation in the ENEA HTS Cable-In-Conduit Conductor. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.1	7
17	SOLPS-ITER modeling of ASDEX Upgrade L-mode detachment states. Plasma Physics and Controlled Fusion, 2021, 63, 105005.	0.9	8
18	Thermal-hydraulic analysis of the DTT CS and PF pulsed coil performance during AC operation. Fusion Engineering and Design, 2021, 173, 112836.	1.0	2

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19	Parametric study of the radiative load distribution on the EU-DEMO first wall due to SPI-mitigated disruptions. Fusion Engineering and Design, 2021, 172, 112917.	1.0	3
20	Analysis of the effects of primary heat transfer system isolation valves in case of in-vessel loss-of-coolant accidents in the EU DEMO. Fusion Engineering and Design, 2020, 159, 111926.	1.0	9
21	Modeling Quench Propagation in the ENEA HTS Cable-In-Conduit Conductor. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-7.	1.1	15
22	Design methodology for a prototype helical receiver adopted in the MOSAIC solar bowl system. Solar Energy, 2020, 208, 905-916.	2.9	5
23	Radiative heat load distribution on the EU-DEMO first wall due to mitigated disruptions. Nuclear Materials and Energy, 2020, 25, 100824.	0.6	5
24	Integrated deterministic and probabilistic safety assessment of a superconducting magnet cryogenic cooling circuit for nuclear fusion applications. Reliability Engineering and System Safety, 2020, 201, 106945.	5.1	7
25	Comparison of SOLPS5.0 and SOLPSâ€ITER simulations for ASDEX upgrade Lâ€mode. Contributions To Plasma Physics, 2020, 60, e201900120.	0.5	2
26	Thermal-Hydraulic Analysis of the DTT Toroidal Field Magnets in DC Operation. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-5.	1.1	8
27	Advance in the conceptual design of the European DEMO magnet system. Superconductor Science and Technology, 2020, 33, 044013.	1.8	38
28	A new model for the analysis of quench in HTS cable-in-conduit conductors based on the twisted-stacked-tape cable concept for fusion applications. Superconductor Science and Technology, 2020, 33, 065004.	1.8	22
29	Analysis of the Flow Distribution in the Back Supporting Structure Manifolds of the HCPB Breeding Blanket for the EU DEMO Fusion Reactor. Fusion Science and Technology, 2019, 75, 365-371.	0.6	1
30	Modeling the ITER CS AC Losses Based on the CS Insert Analysis. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-7.	1.1	5
31	Thermal-Hydraulic Analysis of the JT-60SA Central Solenoid Operation. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.1	7
32	Multi-scale modular analysis of open volumetric receivers for central tower CSP systems. Solar Energy, 2019, 190, 195-211.	2.9	18
33	A critical assessment of thermalâ€“hydraulic modeling of HTS twisted-stacked-tape cable conductors for fusion applications. Superconductor Science and Technology, 2019, 32, 084004.	1.8	29
34	Identification of the Postulated Initiating Events of Accidents Occurring in a Toroidal Field Magnet of the EU DEMO. Fusion Science and Technology, 2019, 75, 412-421.	0.6	3
35	Self-consistent modelling of a liquid metal box-type divertor with application to the divertor tokamak test facility: Li versus Sn. Nuclear Fusion, 2019, 59, 066020.	1.6	11
36	Recent progress in developing a feasible and integrated conceptual design of the WCLL BB in EUROfusion project. Fusion Engineering and Design, 2019, 146, 1805-1809.	1.0	126

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37	Tritium Extraction From HCLL/WCLL/DCLL PbLi BBs of DEMO and HCLL TBS of ITER. IEEE Transactions on Plasma Science, 2019, 47, 1464-1471.	0.6	18
38	A CFD-supported dynamic system-level model of a sodium-cooled billboard-type receiver for central tower CSP applications. Solar Energy, 2019, 177, 576-594.	2.9	24
39	Analysis of an actively-cooled coaxial cavity in a 170â€‰GHz 2â€‰MW gyrotron using the multi-physics computational tool MUCCA. Fusion Engineering and Design, 2019, 146, 74-77.	1.0	2
40	Analysis of a Protected Loss of Flow Accident (LOFA) in the ITER TF Coil Cooling Circuit. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-9.	1.1	4
41	Performance Analysis of the NbTi PF Coils for the EU DEMO Fusion Reactor. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.1	6
42	Thermal-Hydraulic Analysis of the EU DEMO Helium-Cooled Pebble Bed Breeding Blanket Using the GETTHEM Code. IEEE Transactions on Plasma Science, 2018, 46, 1436-1445.	0.6	9
43	Prediction, experimental results and analysis of the ITER TF insert coil quench propagation tests, using the 4C code. Superconductor Science and Technology, 2018, 31, 035004.	1.8	16
44	Modelling of mitigation of the power divertor loading for the EU DEMO through Ar injection. Plasma Physics and Controlled Fusion, 2018, 60, 035013.	0.9	18
45	Numerical Studies on the Influence of Cavity Thermal Expansion on the Performance of a High-Power Gyrotron. IEEE Transactions on Electron Devices, 2018, 65, 2308-2315.	1.6	17
46	Effect of strike point displacements on the ITER tungsten divertor heat loads. Nuclear Fusion, 2018, 58, 126022.	1.6	14
47	Parametric thermal-hydraulic analysis of the EU DEMO Water-Cooled Lithium-Lead First Wall using the GETTHEM code. Fusion Engineering and Design, 2018, 137, 257-267.	1.0	4
48	Modelling an in-vessel loss of coolant accident in the EU DEMO WCLL breeding blanket with the GETTHEM code. Fusion Engineering and Design, 2018, 136, 1226-1230.	1.0	11
49	Hydraulic modeling of a segment of the EU DEMO HCPB breeding blanket back supporting structure. Fusion Engineering and Design, 2018, 136, 1186-1190.	1.0	6
50	Thermalâ€“Hydraulic Test and Analysis of the ENEA TF Conductor Sample for the EU DEMO Fusion Reactor. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-9.	1.1	9
51	Design, Test and Analysis of a Gyrotron Cavity Mock-Up Cooled Using Mini Channels. IEEE Transactions on Plasma Science, 2018, 46, 2207-2215.	0.6	5
52	Progress in the design of the superconducting magnets for the EU DEMO. Fusion Engineering and Design, 2018, 136, 1597-1604.	1.0	67
53	Progress in EU Breeding Blanket design and integration. Fusion Engineering and Design, 2018, 136, 782-792.	1.0	50
54	Analysis of the cooldown of the ITER central solenoid model coil and insert coil. Superconductor Science and Technology, 2017, 30, 015015.	1.8	13

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55	Analysis of AC Losses in the ITER Central Solenoid Insert Coil. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	16
56	Analysis of Quench Propagation in the ITER Central Solenoid Insert (CSI) Coil. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-8.	1.1	9
57	Dynamic thermal-hydraulic modelling of the EU DEMO WCLL breeding blanket cooling loops. Fusion Engineering and Design, 2017, 124, 887-891.	1.0	13
58	Identification of accident sequences for the DEMO plant. Fusion Engineering and Design, 2017, 124, 1277-1280.	1.0	30
59	Analysis of the DC performance of the ITER CSI coil using the 4C code. Fusion Engineering and Design, 2017, 124, 159-162.	1.0	3
60	Performance analysis of a graded winding pack design for the EU DEMO TF coil in normal and off-normal conditions. Fusion Engineering and Design, 2017, 124, 45-48.	1.0	15
61	Characterization of the ITER CS conductor and projection to the ITER CS performance. Fusion Engineering and Design, 2017, 124, 1-5.	1.0	15
62	Modeling the lithium loop in a liquid metal pool-type divertor. Fusion Engineering and Design, 2017, 125, 206-215.	1.0	4
63	The DTT device: Divertor solutions for alternative configurations including liquid metals. Fusion Engineering and Design, 2017, 122, 341-348.	1.0	8
64	Coupled optical and CFD parametric analysis of an open volumetric air receiver of honeycomb type for central tower CSP plants. Solar Energy, 2017, 155, 523-536.	2.9	31
65	Multi-physics analysis of a 1 MW gyrotron cavity cooled by mini-channels. Fusion Engineering and Design, 2017, 123, 313-316.	1.0	22
66	Safety issues related to the intermediate heat storage for the EU DEMO. Fusion Engineering and Design, 2016, 109-111, 135-140.	1.0	6
67	Analyses of Low- and High-Margin Quench Propagation in the European DEMO TF Coil Winding Pack. IEEE Transactions on Plasma Science, 2016, 44, 1564-1570.	0.6	9
68	Dynamic thermal-hydraulic modelling of the EU DEMO HCPB breeding blanket cooling loops. Progress in Nuclear Energy, 2016, 93, 116-132.	1.3	12
69	CFD Analysis of Different Cooling Options for a Gyrotron Cavity. IEEE Transactions on Plasma Science, 2016, 44, 3432-3438.	0.6	8
70	ITER Central Solenoid Insert Test Results. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.1	37
71	Overview of Progress on the EU DEMO Reactor Magnet System Design. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.1	46
72	Artificial Neural Network (ANN) modeling of the pulsed heat load during ITER CS magnet operation. Cryogenics, 2014, 63, 231-240.	0.9	16

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73	CFD analysis of the ITER first wall 06 panel. Part II: Thermal-hydraulics. Fusion Engineering and Design, 2014, 89, 431-441.	1.0	5
74	Verification of the predictive capabilities of the 4C code cryogenic circuit model. AIP Conference Proceedings, 2014, , .	0.3	19
75	CFD analysis of a regular sector of the ITER vacuum vessel. Part I: Flow distribution and pressure drop. Fusion Engineering and Design, 2013, 88, 3272-3279.	1.0	12
76	4C code analysis of thermalâ€“hydraulic transients in the KSTAR PF1 superconducting coil. Cryogenics, 2013, 53, 37-44.	0.9	26
77	Multiscale Approach and Role of Validation in the Thermal-Hydraulic Modeling of the ITER Superconducting Magnets. IEEE Transactions on Applied Superconductivity, 2013, 23, 4900607-4900607.	1.1	12
78	Computation of JT-60SA TF coil temperature margin using the 4C code. Fusion Engineering and Design, 2011, 86, 1493-1496.	1.0	19
79	Validation of the 4C Thermal-Hydraulic Code Against 25 kA Safety Discharge in the ITER Toroidal Field Model Coil (TFMC). IEEE Transactions on Applied Superconductivity, 2011, 21, 1948-1952.	1.1	35
80	The 4C code for the cryogenic circuit conductor and coil modeling in ITER. Cryogenics, 2010, 50, 167-176.	0.9	95
81	Analysis of Quench Propagation in the ITER Poloidal Field Conductor Insert (PFCI). IEEE Transactions on Applied Superconductivity, 2010, 20, 491-494.	1.1	9
82	Test Results From the PF Conductor Insert Coil and Implications for the ITER PF System. IEEE Transactions on Applied Superconductivity, 2009, 19, 1525-1531.	1.1	39
83	Multi-solid multi-channel Mithrandir (M3) code for thermalâ€“hydraulic modelling of ITER Cable-in-Conduit Superconductors. Fusion Engineering and Design, 2007, 82, 1607-1613.	1.0	12
84	A review of thermal-hydraulic issues in ITER cable-in-conduit conductors. Cryogenics, 2006, 46, 541-555.	0.9	51
85	THELMA code electromagnetic model of ITER superconducting cables and application to the ENEA stability experiment. Superconductor Science and Technology, 2006, 19, 987-997.	1.8	35
86	Test of the ITER TF insert and central solenoid model coil. IEEE Transactions on Applied Superconductivity, 2003, 13, 1441-1446.	1.1	32
87	Test of the NaAl insert and ITER central solenoid model coil. IEEE Transactions on Applied Superconductivity, 2003, 13, 1437-1440.	1.1	23
88	Tests and analysis of quench propagation in the ITER toroidal field conductor insert. IEEE Transactions on Applied Superconductivity, 2003, 13, 1412-1415.	1.1	9
89	Test of the ITER central solenoid model coil and CS insert. IEEE Transactions on Applied Superconductivity, 2002, 12, 600-605.	1.1	75
90	Inductively driven transients in the CS Insert Coil (II): Quench tests and analysis. AIP Conference Proceedings, 2002, , .	0.3	17

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91	Progress of the ITER central solenoid model coil programme. Nuclear Fusion, 2001, 41, 645-651.	1.6	63
92	M&M: Multi-conductor Mithrandir code for the simulation of thermal-hydraulic transients in superconducting magnets. Cryogenics, 2000, 40, 179-189.	0.9	58
93	Thermal-hydraulic analysis of Tcs measurement in conductor 1A of the ITER Central Solenoid Model Coil using the M&M code. Cryogenics, 2000, 40, 593-604.	0.9	14
94	Friction factor correlation with application to the central cooling channel of cable-in-conduit super-conductors for fusion magnets. IEEE Transactions on Applied Superconductivity, 2000, 10, 1066-1069.	1.1	32
95	Computer Simulation of Quench Propagation in QUELL. , 1998, , 181-188.		18
96	A comparison between 1- and 2-fluid simulations of the QUELL conductor. IEEE Transactions on Applied Superconductivity, 1997, 7, 493-496.	1.1	16
97	A two-fluid code for the thermohydraulic transient analysis of CICC superconducting magnets. Journal of Fusion Energy, 1995, 14, 25-40.	0.5	66
98	Quench Propagation in a TF Coil of the EU DEMO. Fusion Science and Technology, 0, , 1-10.	0.6	5
99	3D transient CFD simulation of an in-vessel Loss-Of-Coolant Accident in the EU DEMO fusion reactor. Nuclear Fusion, 0, , .	1.6	3