

# Todd E Evans

## List of Publications by Year in descending order

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107  
papers

6,117  
citations

70961

41  
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69108

77  
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108  
all docs

108  
docs citations

108  
times ranked

1916  
citing authors

#	ARTICLE	IF	CITATIONS
1	Suppression of Large Edge-Localized Modes in High-Confinement DIII-D Plasmas with a Stochastic Magnetic Boundary. <i>Physical Review Letters</i> , 2004, 92, 235003.	2.9	734
2	Edge stability and transport control with resonant magnetic perturbations in collisionless tokamak plasmas. <i>Nature Physics</i> , 2006, 2, 419-423.	6.5	538
3	RMP ELM suppression in DIII-D plasmas with ITER similar shapes and collisionalities. <i>Nuclear Fusion</i> , 2008, 48, 024002.	1.6	348
4	Progress on the application of ELM control schemes to ITER scenarios from the non-active phase to DT operation. <i>Nuclear Fusion</i> , 2014, 54, 033007.	1.6	214
5	Principal physics developments evaluated in the ITER design review. <i>Nuclear Fusion</i> , 2009, 49, 065012.	1.6	200
6	Suppression of large edge localized modes with edge resonant magnetic fields in high confinement DIII-D plasmas. <i>Nuclear Fusion</i> , 2005, 45, 595-607.	1.6	166
7	Experimental signatures of homoclinic tangles in poloidally diverted tokamaks. <i>Journal of Physics: Conference Series</i> , 2005, 7, 174-190.	0.3	142
8	Pedestal Bifurcation and Resonant Field Penetration at the Threshold of Edge-Localized Mode Suppression in the DIII-D Tokamak. <i>Physical Review Letters</i> , 2015, 114, 105002.	2.9	141
9	Effect of island overlap on edge localized mode suppression by resonant magnetic perturbations in DIII-D. <i>Physics of Plasmas</i> , 2008, 15, .	0.7	139
10	Overview of the results on divertor heat loads in RMP controlled H-mode plasmas on DIII-D. <i>Nuclear Fusion</i> , 2009, 49, 095013.	1.6	136
11	Study of in-vessel nonaxisymmetric ELM suppression coil concepts for ITER. <i>Nuclear Fusion</i> , 2008, 48, 024004.	1.6	127
12	Mitigation of Tokamak Disruptions Using High-Pressure Gas Injection. <i>Physical Review Letters</i> , 2002, 89, 055001.	2.9	125
13	Modeling of stochastic magnetic flux loss from the edge of a poloidally diverted tokamak. <i>Physics of Plasmas</i> , 2002, 9, 4957-4967.	0.7	120
14	Electron thermal confinement studies with applied resonant fields on TEXT. <i>Nuclear Fusion</i> , 1989, 29, 547-562.	1.6	116
15	Edge localized mode control with an edge resonant magnetic perturbation. <i>Physics of Plasmas</i> , 2005, 12, 056119.	0.7	109
16	Screening of resonant magnetic perturbations by flows in tokamaks. <i>Nuclear Fusion</i> , 2012, 52, 054003.	1.6	106
17	Aspects of three dimensional transport for ELM control experiments in ITER-similar shape plasmas at low collisionality in DIII-D. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124029.	0.9	89
18	Edge localized mode physics and operational aspects in tokamaks. <i>Plasma Physics and Controlled Fusion</i> , 2003, 45, A93-A113.	0.9	88

#	ARTICLE	IF	CITATIONS
19	The physics of edge resonant magnetic perturbations in hot tokamak plasmas. <i>Physics of Plasmas</i> , 2006, 13, 056121.	0.7	86
20	Gas jet disruption mitigation studies on Alcator C-Mod and DIII-D. <i>Nuclear Fusion</i> , 2007, 47, 1086-1091.	1.6	86
21	Physics of penetration of resonant magnetic perturbations used for Type I edge localized modes suppression in tokamaks. <i>Nuclear Fusion</i> , 2009, 49, 085011.	1.6	82
22	Lâ€H transition studies on DIII-D to determine H-mode access for operational scenarios in ITER. <i>Nuclear Fusion</i> , 2011, 51, 103020.	1.6	81
23	Homoclinic tangles, bifurcations and edge stochasticity in diverted tokamaks. <i>Contributions To Plasma Physics</i> , 2004, 44, 235-240.	0.5	78
24	Resonant magnetic perturbations of edge-plasmas in toroidal confinement devices. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 123001.	0.9	76
25	Edge stability of stationary ELM-suppressed regimes on DIII-D. <i>Journal of Physics: Conference Series</i> , 2008, 123, 012014.	0.3	75
26	3D vacuum magnetic field modelling of the ITER ELM control coil during standard operating scenarios. <i>Nuclear Fusion</i> , 2013, 53, 093029.	1.6	72
27	Numerical study of the resonant magnetic perturbations for Type I edge localized modes control in ITER. <i>Nuclear Fusion</i> , 2008, 48, 024003.	1.6	71
28	High resolution numerical studies of separatrix splitting due to non-axisymmetric perturbation in DIII-D. <i>Nuclear Fusion</i> , 2009, 49, 055027.	1.6	70
29	Three-dimensional edge transport simulations for DIII-D plasmas with resonant magnetic perturbations. <i>Nuclear Fusion</i> , 2010, 50, 034004.	1.6	69
30	Survey of target plate heat flux in diverted DIII-D tokamak discharges. <i>Nuclear Fusion</i> , 1998, 38, 1225-1249.	1.6	65
31	Advances in the physics understanding of ELM suppression using resonant magnetic perturbations in DIII-D. <i>Nuclear Fusion</i> , 2015, 55, 023002.	1.6	62
32	Resonant Pedestal Pressure Reduction Induced by a Thermal Transport Enhancement due to Stochastic Magnetic Boundary Layers in High Temperature Plasmas. <i>Physical Review Letters</i> , 2009, 103, 165005.	2.9	58
33	Role of plasma response in displacements of the tokamak edge due to applied non-axisymmetric fields. <i>Nuclear Fusion</i> , 2013, 53, 073042.	1.6	58
34	Experiments in DIII-D toward achieving rapid shutdown with runaway electron suppression. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	57
35	Explicit calculations of homoclinic tangles in tokamaks. <i>Physics of Plasmas</i> , 2003, 10, 3796-3799.	0.7	54
36	Suppression of large edge localized modes in high confinement DIII-D plasmas with a stochastic magnetic boundary. <i>Journal of Nuclear Materials</i> , 2005, 337-339, 691-696.	1.3	54

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37	High fusion performance in Super H-mode experiments on Alcator C-Mod and DIII-D. Nuclear Fusion, 2019, 59, 086017.	1.6	48
38	Measurement of plasma boundary displacement by $n=2$ magnetic perturbations using imaging beam emission spectroscopy. Nuclear Fusion, 2012, 52, 123019.	1.6	47
39	Impurity confinement and transport in high confinement regimes without edge localized modes on	0.7	47
40	Sustained suppression of type-I edge-localized modes with dominantly $n=2$ magnetic fields in DIII-D. Nuclear Fusion, 2013, 53, 083019.	1.6	46
41	Overview of NSTX Upgrade initial results and modelling highlights. Nuclear Fusion, 2017, 57, 102006.	1.6	45
42	Measurements of non-axisymmetric effects in the DIII-D divertor. Journal of Nuclear Materials, 1995, 220-222, 235-239.	1.3	43
43	Validation of the model for ELM suppression with 3D magnetic fields using low torque ITER baseline scenario discharges in DIII-D. Physics of Plasmas, 2017, 24, .	0.7	43
44	Footprint structures due to resonant magnetic perturbations in DIII-D. Physics of Plasmas, 2009, 16, 042504.	0.7	42
45	Experimental and numerical studies of separatrix splitting and magnetic footprints in DIII-D. Journal of Nuclear Materials, 2007, 363-365, 570-574.	1.3	41
46	Hysteresis Relation between Turbulence and Temperature Modulation during the Heat Pulse Propagation into a Magnetic Island in DIII-D. Physical Review Letters, 2018, 120, 245001.	2.9	38
47	Grassy-ELM regime with edge resonant magnetic perturbations in fully noninductive plasmas in the DIII-D tokamak. Nuclear Fusion, 2018, 58, 106010.	1.6	35
48	Observation of SOL current correlated with MHD activity in NBI heated DIII-D tokamak discharges. Nuclear Fusion, 2004, 44, 1075-1096.	1.6	33
49	Numerical Modeling of Edge-Localized-Mode Filaments on Divertor Plates Based on Thermoelectric Currents. Physical Review Letters, 2010, 104, 175001.	2.9	33
50	A conceptual model of the magnetic topology and nonlinear dynamics of ELMs. Journal of Nuclear Materials, 2009, 390-391, 789-792.	1.3	30
51	Investigation of the role of pedestal pressure and collisionality on type-I ELM divertor heat loads in DIII-D. Nuclear Fusion, 2018, 58, 096023.	1.6	29
52	Self-regulated oscillation of transport and topology of magnetic islands in toroidal plasmas. Scientific Reports, 2015, 5, 16165.	1.6	27
53	Bifurcated helical core equilibrium states in tokamaks. Nuclear Fusion, 2013, 53, 073021.	1.6	26
54	Tokamak plasma high field side response to an $n=3$ magnetic perturbation: a comparison of 3D equilibrium solutions from seven different codes. Nuclear Fusion, 2015, 55, 063026.	1.6	26

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55	Advances in the steady-state hybrid regime in DIII-D—a fully non-inductive, ELM-suppressed scenario for ITER. Nuclear Fusion, 2017, 57, 116057.	1.6	25
56	3D effects of edge magnetic field configuration on divertor/scrape-off layer transport and optimization possibilities for a future reactor. Nuclear Fusion, 2015, 55, 104021.	1.6	23
57	Connection between plasma response and resonant magnetic perturbation (RMP) edge localized mode (ELM) suppression in DIII-D. Plasma Physics and Controlled Fusion, 2015, 57, 104006.	0.9	23
58	Edge localized modes control by stochastic magnetic fields. Nuclear Fusion, 2005, 45, 1284-1292.	1.6	20
59	Impact of plasma response on plasma displacements in DIII-D during application of external 3D perturbations. Nuclear Fusion, 2014, 54, 064007.	1.6	20
60	The pattern of parallel edge plasma flows due to pressure gradients, recycling, and resonant magnetic perturbations in DIII-D. Physics of Plasmas, 2015, 22, .	0.7	20
61	L-H transition trigger physics in ITER-similar plasmas with applied n=3 magnetic perturbations. Nuclear Fusion, 2019, 59, 126010.	1.6	20
62	Suppression and Mitigation of Edge Localized Modes in the DIII-D Tokamak with 3D Magnetic Perturbations. Plasma and Fusion Research, 2012, 7, 2402046-2402046.	0.3	17
63	Dynamic divertor control using resonant mixed toroidal harmonic magnetic fields during ELM suppression in DIII-D. Physics of Plasmas, 2018, 25, 056102.	0.7	17
64	Comparison of the numerical modelling and experimental measurements of DIII-D separatrix displacements during H-modes with resonant magnetic perturbations. Nuclear Fusion, 2014, 54, 093008.	1.6	16
65	Suppression of type-I ELMs with reduced RMP coil set on DIII-D. Nuclear Fusion, 2016, 56, 036020.	1.6	16
66	Bifurcation physics of magnetic islands and stochasticity explored by heat pulse propagation studies in toroidal plasmas. Nuclear Fusion, 2016, 56, 092001.	1.6	15
67	Analysis of edge magnetic field line structure in ITER due to in-vessel ELM control coils. Fusion Engineering and Design, 2012, 87, 1536-1543.	1.0	14
68	On the stability and stationarity of the Super H-mode combined with an ion transport barrier in the core. Plasma Physics and Controlled Fusion, 2021, 63, 025017.	0.9	14
69	Imaging divertor strike point splitting in RMP ELM suppression experiments in the DIII-D tokamak. Review of Scientific Instruments, 2018, 89, 10E106.	0.6	13
70	Predict-first experimental analysis using automated and integrated magnetohydrodynamic modeling. Physics of Plasmas, 2018, 25, .	0.7	13
71	Direct measurements of internal structures of born-locked modes and the key role in triggering tokamak disruptions. Physics of Plasmas, 2019, 26, 042505.	0.7	13
72	Optimizing the Super H-mode pedestal to improve performance and facilitate divertor integration. Physics of Plasmas, 2020, 27, 102506.	0.7	13

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73	2D soft x-ray system on DIII-D for imaging the magnetic topology in the pedestal region. Review of Scientific Instruments, 2010, 81, 10E534.	0.6	12
74	The energy confinement response of DIII-D plasmas to resonant magnetic perturbations. Nuclear Fusion, 2017, 57, 116030.	1.6	12
75	Edge localized mode suppression and plasma response using mixed toroidal harmonic resonant magnetic perturbations in DIII-D. Nuclear Fusion, 2019, 59, 026012.	1.6	12
76	Real-time pedestal optimization and ELM control with 3D fields and gas flows on DIII-D. Nuclear Fusion, 2020, 60, 076004.	1.6	12
77	Modelling of stochastic magnetic perturbation by RWMEF coils on NSTX. Nuclear Fusion, 2006, 46, 858-863.	1.6	11
78	Accelerating the numerical simulation of magnetic field lines in tokamaks using the GPU. Fusion Engineering and Design, 2011, 86, 399-406.	1.0	11
79	Experimental Observation of Magnetic Island Heteroclinic Bifurcation in Tokamaks. Physical Review Letters, 2021, 126, 085003.	2.9	11
80	ELM pacing using modulated non-axisymmetric magnetic fields on DIII-D. Nuclear Fusion, 2012, 52, 033007.	1.6	10
81	Heat flux modeling using ion drift effects in DIII-D H-mode plasmas with resonant magnetic perturbations. Physics of Plasmas, 2014, 21, 012509.	0.7	10
82	Controlled neoclassical tearing mode (NTM) healing by fueling pellets and its impact on electron cyclotron current drive requirements for complete NTM stabilization. Nuclear Fusion, 2019, 59, 126047.	1.6	10
83	ELM suppression in helium plasmas with 3D magnetic fields. Nuclear Fusion, 2017, 57, 086016.	1.6	9
84	Non-linear MHD modelling of edge localized modes suppression by resonant magnetic perturbations in ITER. Nuclear Fusion, 2022, 62, 066022.	1.6	9
85	Numerical analysis of the effects of normalized plasma pressure on RMP ELM suppression in DIII-D. Nuclear Fusion, 2010, 50, 034010.	1.6	8
86	Plasma response measurements of non-axisymmetric magnetic perturbations on DIII-D via soft x-ray	0.7	8
87	Modeling non-stationary, non-axisymmetric heat patterns in DIII-D tokamak. Nuclear Fusion, 2017, 57, 016017.	1.6	8
88	NSTX-U theory, modeling and analysis results. Nuclear Fusion, 2022, 62, 042023.	1.6	8
89	Effect of thermoelectric current splitting on the magnetic topology in DIII-D. Physics of Plasmas, 2011, 18, 042501.	0.7	7
90	Propagation Dynamics Associated with Resonant Magnetic Perturbation Fields in High-Confinement Mode Plasmas inside the KSTAR Tokamak. Physical Review Letters, 2017, 119, 205001.	2.9	7

#	ARTICLE	IF	CITATIONS
91	Efficient manifolds tracing for planar maps. Chaos, 2018, 28, 093106.	1.0	7
92	Pedestal collapse by resonant magnetic perturbations. Nuclear Fusion, 2021, 61, 044001.	1.6	7
93	Location of the first plasma response to resonant magnetic perturbations in DIII-D H-mode plasmas. Nuclear Fusion, 2016, 56, 064001.	1.6	6
94	Divertor currents during type-I edge-localized modes on the DIII-D tokamak. Nuclear Fusion, 2019, 59, 126020.	1.6	5
95	Enhanced helium exhaust during edge-localized mode suppression by resonant magnetic perturbations at DIII-D. Nuclear Fusion, 2020, 60, 054004.	1.6	5
96	Experimental inference of flux tunneling between magnetic island chains in tokamaks. Nuclear Fusion, 2021, 61, 074001.	1.6	5
97	Observation of divertor currents during type-I ELMs on the DIII-D tokamak. Nuclear Materials and Energy, 2019, 18, 222-226.	0.6	4
98	Assessment of equilibrium field coil misalignments on the divertor footprints in NSTX-U. Nuclear Fusion, 2019, 59, 076039.	1.6	4
99	Topological bifurcation of magnetic islands in NSTX-U. Nuclear Fusion, 2019, 59, 066010.	1.6	4
100	Observations of heteroclinic bifurcations in resistive magnetohydrodynamic simulations of the plasma response to resonant magnetic perturbations. Physical Review E, 2021, 103, 013209.	0.8	4
101	First observation of plasma healing via helical equilibrium in tokamak disruptions. Nuclear Fusion, 2019, 59, 094002.	1.6	3
102	Measurements of three-dimensional flows induced by magnetic islands. Physical Review Research, 2020, 2, .	1.3	2
103	New heat flux model for non-axisymmetric divertor infrared structures. Nuclear Fusion, 2021, 61, 016018.	1.6	2
104	Effects of two-dimensional magnetic uncertainties and three-dimensional error and perturbation fields on the Small Angle Slot divertor geometry and topology. Nuclear Fusion, 2018, 58, 026022.	1.6	1
105	Study of H-mode pedestal model for helium plasmas in DIII-D. Nuclear Fusion, 2021, 61, 096002.	1.6	0
106	Investigations of plasma response associated with Resonant Magnetic Perturbation fields using perturbation method in KSTAR H-mode plasmas. Nuclear Fusion, 0, , .	1.6	0
107	NSTX-U theory, modeling and analysis results. Nuclear Fusion, 0, , .	1.6	0