

# Neal Crocker

## List of Publications by Year in descending order

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54  
papers

1,275  
citations

361413

20  
h-index

361022

35  
g-index

54  
all docs

54  
docs citations

54  
times ranked

1062  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the transition to drift turbulence in a magnetized plasma column. Physics of Plasmas, 2005, 12, 052320.	1.9	110
2	Collective fast ion instability-induced losses in National Spherical Tokamak Experiment. Physics of Plasmas, 2006, 13, 056109.	1.9	89
3	Beta-induced Alfvén-acoustic eigenmodes in National Spherical Torus Experiment and DIII-D driven by beam ions. Physics of Plasmas, 2009, 16, .	1.9	75
4	Growth and decay of runaway electrons above the critical electric field under quiescent conditions. Physics of Plasmas, 2014, 21, 022514.	1.9	60
5	Modeling fast-ion transport during toroidal Alfvén eigenmode avalanches in National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, 122505.	1.9	59
6	Predictions and observations of global beta-induced Alfvén-acoustic modes in JET and NSTX. Plasma Physics and Controlled Fusion, 2007, 49, B371-B383.	2.1	57
7	Experimental studies on fast-ion transport by Alfvén wave avalanches on the National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, .	1.9	56
8	Simulation of microtearing turbulence in national spherical torus experiment. Physics of Plasmas, 2012, 19, 056119.	1.9	53
9	High spatial sampling global mode structure measurements via multichannel reflectometry in NSTX. Plasma Physics and Controlled Fusion, 2011, 53, 105001.	2.1	48
10	Non-perturbative measurement of cross-field thermal diffusivity reduction at the O-point of 2/1 neoclassical tearing mode islands in the DIII-D tokamak. Physics of Plasmas, 2016, 23, .	1.9	46
11	Enhanced Confinement with Plasma Biasing in the MST Reversed Field Pinch. Physical Review Letters, 1997, 79, 1865-1868.	7.8	42
12	Three-Wave Interactions between Fast-Ion Modes in the National Spherical Torus Experiment. Physical Review Letters, 2006, 97, 045002.	7.8	41
13	$\hat{\Gamma}^2$ suppression of Alfvén cascade modes in the National Spherical Torus Experiment. Physics of Plasmas, 2007, 14, .	1.9	41
14	Coupling of Neutral-Beam-Driven Compressional Alfvén Eigenmodes to Kinetic Alfvén Waves in NSTX Tokamak and Energy Channeling. Physical Review Letters, 2015, 115, 015001.	7.8	36
15	Intermediate- $k$ density and magnetic field fluctuations during inter-ELM pedestal evolution in MAST. Plasma Physics and Controlled Fusion, 2016, 58, 014020.	2.1	31
16	Suppression of Alfvén Modes on the National Spherical Torus Experiment Upgrade with Outboard Beam Injection. Physical Review Letters, 2017, 118, 265001.	7.8	31
17	Measurement of the Current Sheet during Magnetic Reconnection in a Toroidal Plasma. Physical Review Letters, 2003, 90, 035003.	7.8	26
18	Mitigation of Alfvénic activity by 3D magnetic perturbations on NSTX. Plasma Physics and Controlled Fusion, 2016, 58, 085003.	2.1	23

#	ARTICLE	IF	CITATIONS
19	Nonlinear simulations of beam-driven compressional Alfvén eigenmodes in NSTX. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	22
20	Modifications to the edge current profile with auxiliary edge current drive and improved confinement in a reversed-field pinch. <i>Physics of Plasmas</i> , 2000, 7, 3491-3494.	1.9	20
21	High-resolution dual-polarization frequency modulated reflectometer density profile measurements on DIII-D. <i>Review of Scientific Instruments</i> , 2004, 75, 3800-3803.	1.3	20
22	Alfvén cascade modes at high $\hat{I}^2$ in the National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	20
23	Recent results from the ATF torsatron. <i>Physics of Fluids B</i> , 1991, 3, 2261-2269.	1.7	19
24	Non-linear modulation of short wavelength compressional Alfvén eigenmodes. <i>Physics of Plasmas</i> , 2013, 20, 042112.	1.9	18
25	Effects of toroidal rotation shear on toroidicity-induced Alfvén eigenmodes in the National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2010, 17, 122501.	1.9	17
26	Numerical simulations of global Alfvén eigenmodes excitation and stabilization in NSTX-U. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	15
27	Stability of beta-induced Alfvén eigenmodes (BAE) in DIII-D. <i>Nuclear Fusion</i> , 2021, 61, 066031.	3.5	15
28	Ultrafast millimeter-wave frequency-modulated continuous-wave reflectometry for NSTX. <i>Review of Scientific Instruments</i> , 2006, 77, 10E926.	1.3	14
29	Hybrid simulation of toroidal Alfvén eigenmode on the National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2015, 22, 042509.	1.9	13
30	Development of a cross-polarization scattering system for the measurement of internal magnetic fluctuations in the DIII-D tokamak. <i>Review of Scientific Instruments</i> , 2014, 85, 11D838.	1.3	12
31	Density perturbation mode structure of high frequency compressional and global Alfvén eigenmodes in the National Spherical Torus Experiment using a novel reflectometer analysis technique. <i>Nuclear Fusion</i> , 2018, 58, 016051.	3.5	12
32	Measurement of local, internal magnetic fluctuations via cross-polarization scattering in the DIII-D tokamak (invited). <i>Review of Scientific Instruments</i> , 2016, 87, 11E601.	1.3	11
33	Simultaneous measurement of magnetic and density fluctuations via cross-polarization scattering and Doppler backscattering on the DIII-D tokamak. <i>Review of Scientific Instruments</i> , 2016, 87, 11E726.	1.3	11
34	Analytic stability boundaries for compressional and global Alfvén eigenmodes driven by fast ions. I. Interaction via ordinary and anomalous cyclotron resonances. <i>Physics of Plasmas</i> , 2020, 27, 022513.	1.9	10
35	Stabilization of Alfvén Eigenmodes in DIII-D via Controlled Energetic Ion Density Ramp and Validation of Theory and Simulations. <i>Physical Review Letters</i> , 2021, 126, 155001.	7.8	10
36	Novel internal measurements of ion cyclotron frequency range fast-ion driven modes. <i>Nuclear Fusion</i> , 0, , .	3.5	10

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37	Interaction between Faraday rotation and Cotton-Mouton effects in polarimetry modeling for NSTX. Review of Scientific Instruments, 2010, 81, 10D519.	1.3	9
38	Global Alfvén eigenmode scaling and suppression: experiment and theory. Nuclear Fusion, 2018, 58, 082022.	3.5	9
39	Multiscale Chirping Modes Driven by Thermal Ions in a Plasma with Reactor-Relevant Ion Temperature. Physical Review Letters, 2021, 127, 025001.	7.8	8
40	Three-wave interactions between fast-ion driven modes in the National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, .	1.9	7
41	Signal analysis of fluctuations in toroidal fusion plasmas. Review of Scientific Instruments, 1993, 64, 2428-2433.	1.3	6
42	Design of a millimeter-wave polarimeter for NSTX-Upgrade and initial test on DIII-D. Review of Scientific Instruments, 2012, 83, 10E321.	1.3	6
43	Evaluation of low-frequency operational limit of proposed ITER low-field-side reflectometer waveguide run including miter bends. Review of Scientific Instruments, 2017, 88, 103508.	1.3	6
44	Isotope dependence of beta-induced Alfvén eigenmode (BAE) and low frequency mode (LFM) stability in DIII-D. Nuclear Fusion, 2021, 61, 106021.	3.5	6
45	Plasma flow in MST: Effects of edge biasing and momentum transport from nonlinear magnetic torques. European Physical Journal D, 2000, 50, 1471-1476.	0.4	5
46	Analytic stability boundaries for compressional and global Alfvén eigenmodes driven by fast ions. II. Interaction via Landau resonance. Physics of Plasmas, 2020, 27, 022512.	1.9	5
47	A sensitivity assessment of millimeter-wave polarimetry for measurement of magnetic fluctuations associated with microtearing modes in NSTX-U. Plasma Physics and Controlled Fusion, 2013, 55, 045011.	2.1	4
48	Initial Report On The Transition to Turbulence in a Magnetized Plasma Column. AIP Conference Proceedings, 2003, , .	0.4	3
49	First step toward a synthetic diagnostic for magnetic fluctuation measurements using cross-polarization scattering on DIII-D. Review of Scientific Instruments, 2018, 89, 10H113.	1.3	3
50	Experimental validation of Mueller-Stokes theory and investigation of the influence of the Cotton-Mouton effect on polarimetry in a magnetized fusion plasma. Physics of Plasmas, 2013, 20, 102519.	1.9	2
51	A Ka-band tunable direct-conversion correlation reflectometer for NSTX. Review of Scientific Instruments, 2010, 81, 10D917.	1.3	1
52	New methodology for measuring electron density perturbations caused by plasma coherent modes using profile reflectometry: Magnitudes and radial profiles in DIII-D. Review of Scientific Instruments, 2021, 92, 043550.	1.3	1
53	Comparison of Measurement and Modeling of Current Profile Changes due to Neutral Beam Ion Redistribution during TAE Avalanches in NSTX. Plasma and Fusion Research, 2013, 8, 2402119-2402119.	0.7	1
54	REVIEW OF THE NATIONAL SPHERICAL TORUS EXPERIMENT RESEARCH RESULTS. , 2009, , .		0