## John C Dorelli

## List of Publications by Year in descending order

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130 papers	6,282 citations	41 h-index	74 g-index
136 all docs	136 docs citations	136 times ranked	2331 citing authors

#	Article	IF	Citations
1	The Solar Wind at (16) Psyche: Predictions for a Metal World. Astrophysical Journal, 2022, 927, 202.	1.6	4
2	Automatic Identification and New Observations of Ion Energy Dispersion Events in the Cusp Ionosphere. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	2
3	Statistical Survey of Collisionless Dissipation in the Terrestrial Magnetosheath. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA029000.	0.8	12
4	Structures in the terms of the Vlasov equation observed at Earth's magnetopause. Nature Physics, 2021, 17, 1056-1065.	6.5	15
5	A Study of the Solar Wind Ion and Electron Measurements From the Magnetospheric Multiscale Mission's Fast Plasma Investigation. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029784.	0.8	7
6	Recommendations to Advance Space Trusted Autonomy. , 2021, , .		4
7	Magnetotail reconnection asymmetries in an ion-scale, Earth-like magnetosphere. Annales Geophysicae, 2021, 39, 991-1003.	0.6	3
8	Electron Bernstein waves driven by electron crescents near the electron diffusion region. Nature Communications, 2020, 11, 141.	5.8	26
9	MMS Observations of Intense Whistler Waves Within Earth's Supercritical Bow Shock: Source Mechanism andÂlmpact on Shock Structure and Plasma Transport. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027290.	0.8	19
10	Neural Network Repair of Lossy Compression Artifacts in the September 2015 to March 2016 Duration of the MMS/FPI Data Set. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027181.	0.8	2
11	On the Ubiquity of Magnetic Reconnection Inside Flux Transfer Event‣ike Structures at the Earth's Magnetopause. Geophysical Research Letters, 2020, 47, e2019GL086726.	1.5	20
12	Latitudinal Dependence of the Kelvinâ∈Helmholtz Instability and Beta Dependence of Vortexâ∈Induced Highâ∈Guide Field Magnetic Reconnection. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027333.	0.8	7
13	Lower-Hybrid Drift Waves Driving Electron Nongyrotropic Heating and Vortical Flows in a Magnetic Reconnection Layer. Physical Review Letters, 2020, 125, 025103.	2.9	29
14	On the deviation from Maxwellian of the ion velocity distribution functions in the turbulentÂmagnetosheath. Journal of Plasma Physics, 2020, 86, .	0.7	15
15	Magnetic Reconnection Inside a Flux Rope Induced by Kelvinâ€Helmholtz Vortices. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027665.	0.8	26
16	Magnetic Reconnection Inside a Flux Transfer Eventâ€Like Structure in Magnetopause Kelvinâ€Helmholtz Waves. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027527.	0.8	10
17	Electron Vorticity Indicative of the Electron Diffusion Region of Magnetic Reconnection. Geophysical Research Letters, 2019, 46, 6287-6296.	1.5	23
18	Fourâ€Spacecraft Measurements of the Shape and Dimensionality of Magnetic Structures in the Nearâ€Earth Plasma Environment. Journal of Geophysical Research: Space Physics, 2019, 124, 6850-6868.	0.8	7

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19	Decomposition of plasma kinetic entropy into position and velocity space and the use of kinetic entropy in particle-in-cell simulations. Physics of Plasmas, 2019, 26, .	0.7	20
20	MMS Measurements of the Vlasov Equation: Probing the Electron Pressure Divergence Within Thin Current Sheets. Geophysical Research Letters, 2019, 46, 7862-7872.	1.5	19
21	Does the Solar Wind Electric Field Control the Reconnection Rate at Earth's Subsolar Magnetopause?. Journal of Geophysical Research: Space Physics, 2019, 124, 2668-2681.	0.8	6
22	Crescentâ€Shaped Electron Distributions at the Nonreconnecting Magnetopause: Magnetospheric Multiscale Observations. Geophysical Research Letters, 2019, 46, 3024-3032.	1.5	17
23	Systematic Uncertainties in Plasma Parameters Reported by the Fast Plasma Investigation on NASA's Magnetospheric Multiscale Mission. Journal of Geophysical Research: Space Physics, 2019, 124, 10345-10359.	0.8	16
24	Pressure Tensor Elements Breaking the Frozen-In Law During Reconnection in Earth's Magnetotail. Physical Review Letters, 2019, 123, 225101.	2.9	37
25	Electron Scattering by Low-frequency Whistler Waves at Earth's Bow Shock. Astrophysical Journal, 2019, 886, 53.	1.6	28
26	The Properties of Lion Roars and Electron Dynamics in Mirror Mode Waves Observed by the Magnetospheric MultiScale Mission. Journal of Geophysical Research: Space Physics, 2018, 123, 93-103.	0.8	26
27	Largeâ€Scale Survey of the Structure of the Dayside Magnetopause by MMS. Journal of Geophysical Research: Space Physics, 2018, 123, 2018-2033.	0.8	27
28	Energy partitioning constraints at kinetic scales in low- <i><math>\hat{l}^2</math></i> turbulence. Physics of Plasmas, 2018, 25, .	0.7	25
29	On the role of system size in Hall MHD magnetic reconnection. Physics of Plasmas, 2018, 25, 022103.	0.7	6
30	Quantifying the effect of non-Larmor motion of electrons on the pressure tensor. Physics of Plasmas, 2018, 25, .	0.7	7
31	Magnetic Reconnection, Turbulence, and Particle Acceleration: Observations in the Earth's Magnetotail. Geophysical Research Letters, 2018, 45, 3338-3347.	1.5	69
32	Spacecraft Observations of Oblique Electron Beams Breaking the Frozen-In Law During Asymmetric Reconnection. Physical Review Letters, 2018, 120, 055101.	2.9	20
33	Electron Crescent Distributions as a Manifestation of Diamagnetic Drift in an Electronâ€Scale Current Sheet: Magnetospheric Multiscale Observations Using New 7.5Âms Fast Plasma Investigation Moments. Geophysical Research Letters, 2018, 45, 578-584.	1.5	52
34	Electron Dynamics Within the Electron Diffusion Region of Asymmetric Reconnection. Journal of Geophysical Research: Space Physics, 2018, 123, 146-162.	0.8	10
35	Plasma Density Estimates From Spacecraft Potential Using MMS Observations in the Dayside Magnetosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 2620-2629.	0.8	16
36	New Results From <i>Galileo </i> 's First Flyby of Ganymede: Reconnectionâ€Driven Flows at the Lowâ€Latitude Magnetopause Boundary, Crossing the Cusp, and Icy Ionospheric Escape. Geophysical Research Letters, 2018, 45, 3382-3392.	1.5	20

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37	Localized Oscillatory Energy Conversion in Magnetopause Reconnection. Geophysical Research Letters, 2018, 45, 1237-1245.	1.5	41
38	Wave Phenomena and Beamâ€Plasma Interactions at the Magnetopause Reconnection Region. Journal of Geophysical Research: Space Physics, 2018, 123, 1118-1133.	0.8	19
39	In Situ Observation of Intermittent Dissipation at Kinetic Scales in the Earth's Magnetosheath. Astrophysical Journal Letters, 2018, 856, L19.	3.0	55
40	Magnetic Reconnection at a Thin Current Sheet Separating Two Interlaced Flux Tubes at the Earth's Magnetopause. Journal of Geophysical Research: Space Physics, 2018, 123, 1779-1793.	0.8	35
41	Electron-scale dynamics of the diffusion region during symmetric magnetic reconnection in space. Science, 2018, 362, 1391-1395.	6.0	221
42	Incompressive Energy Transfer in the Earth's Magnetosheath: Magnetospheric Multiscale Observations. Astrophysical Journal, 2018, 866, 106.	1.6	42
43	MMS Observations of Beta-dependent Constraints on Ion Temperature Anisotropy in Earth's Magnetosheath. Astrophysical Journal, 2018, 866, 25.	1.6	21
44	Smallâ€Scale Flux Transfer Events Formed in the Reconnection Exhaust Region Between Two X Lines. Journal of Geophysical Research: Space Physics, 2018, 123, 8473-8488.	0.8	23
45	Solar Wind Turbulence Studies Using MMS Fast Plasma Investigation Data. Astrophysical Journal, 2018, 866, 81.	1.6	48
46	Ion Kinetics in a Hot Flow Anomaly: MMS Observations. Geophysical Research Letters, 2018, 45, 11,520.	1.5	28
47	Electron Bulk Acceleration and Thermalization at Earth's Quasiperpendicular Bow Shock. Physical Review Letters, 2018, 120, 225101.	2.9	38
48	Physically Accurate Large Dynamic Range Pseudo Moments for the MMS Fast Plasma Investigation. Earth and Space Science, 2018, 5, 503-515.	1.1	1
49	Ionâ€Scale Kinetic Alfvén Turbulence: MMS Measurements of the Alfvén Ratio in the Magnetosheath. Geophysical Research Letters, 2018, 45, 7974-7984.	1.5	19
50	Energy Conversion and Collisionless Plasma Dissipation Channels in the Turbulent Magnetosheath Observed by the Magnetospheric Multiscale Mission. Astrophysical Journal, 2018, 862, 32.	1.6	55
51	Electron magnetic reconnection without ion coupling in Earth's turbulent magnetosheath. Nature, 2018, 557, 202-206.	13.7	263
52	Electron Heating at Kinetic Scales in Magnetosheath Turbulence. Astrophysical Journal, 2017, 836, 247.	1.6	50
53	Magnetospheric Multiscale mission observations of the outer electron diffusion region. Geophysical Research Letters, 2017, 44, 2049-2059.	1.5	41
54	Quantitative analysis of a Hall system in the exhaust of asymmetric magnetic reconnection. Journal of Geophysical Research: Space Physics, 2017, 122, 5277-5289.	0.8	21

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55	Electron Scattering by High-frequency Whistler Waves at Earth's Bow Shock. Astrophysical Journal Letters, 2017, 842, L11.	3.0	46
56	Electron diffusion region during magnetopause reconnection with an intermediate guide field: Magnetospheric multiscale observations. Journal of Geophysical Research: Space Physics, 2017, 122, 5235-5246.	0.8	52
57	Reconstruction of the electron diffusion region observed by the Magnetospheric Multiscale spacecraft: First results. Geophysical Research Letters, 2017, 44, 4566-4574.	1.5	27
58	Parallel electron heating in the magnetospheric inflow region. Geophysical Research Letters, 2017, 44, 4384-4392.	1.5	8
59	Wave-particle energy exchange directly observed in a kinetic Alfv $\tilde{A}$ @n-branch wave. Nature Communications, 2017, 8, 14719.	5.8	73
60	Drift waves, intense parallel electric fields, and turbulence associated with asymmetric magnetic reconnection at the magnetopause. Geophysical Research Letters, 2017, 44, 2978-2986.	1.5	46
61	Lower hybrid waves in the ion diffusion and magnetospheric inflow regions. Journal of Geophysical Research: Space Physics, 2017, 122, 517-533.	0.8	108
62	MMS Observation of Magnetic Reconnection in the Turbulent Magnetosheath. Journal of Geophysical Research: Space Physics, 2017, 122, 11,442.	0.8	73
63	Lower Hybrid Drift Waves and Electromagnetic Electron Spaceâ€Phase Holes Associated With Dipolarization Fronts and Fieldâ€Aligned Currents Observed by the Magnetospheric Multiscale Mission During a Substorm. Journal of Geophysical Research: Space Physics, 2017, 122, 12,236.	0.8	31
64	Spacecraft and Instrument Photoelectrons Measured by the Dual Electron Spectrometers on MMS. Journal of Geophysical Research: Space Physics, 2017, 122, 11,548.	0.8	39
65	Simultaneous Remote Observations of Intense Reconnection Effects by DMSP and MMS Spacecraft During a Storm Time Substorm. Journal of Geophysical Research: Space Physics, 2017, 122, 10891-10909.	0.8	17
66	MMS Observations of Reconnection at Dayside Magnetopause Crossings During Transitions of the Solar Wind to Subâ€Alfvénic Flow. Journal of Geophysical Research: Space Physics, 2017, 122, 9934-9951.	0.8	3
67	Structure and Dissipation Characteristics of an Electron Diffusion Region Observed by MMS During a Rapid, Normalâ€Incidence Magnetopause Crossing. Journal of Geophysical Research: Space Physics, 2017, 122, 11,901.	0.8	18
68	Performance of a spaceâ€based wavelet compressor for plasma count data on the MMS Fast Plasma Investigation. Journal of Geophysical Research: Space Physics, 2017, 122, 765-779.	0.8	12
69	Mission Oriented Support and Theory (MOST) for MMSâ€"the Goddard Space Flight Center/University of California Los Angeles Interdisciplinary Science Program. , 2017, , 687-717.		0
70	Fast Plasma Investigation for Magnetospheric Multiscale. , 2017, , 329-404.		3
71	Currents and associated electron scattering and bouncing near the diffusion region at Earth's magnetopause. Geophysical Research Letters, 2016, 43, 3042-3050.	1.5	81
72	lonâ€scale secondary flux ropes generated by magnetopause reconnection as resolved by MMS. Geophysical Research Letters, 2016, 43, 4716-4724.	1.5	95

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73	Electron jet of asymmetric reconnection. Geophysical Research Letters, 2016, 43, 5571-5580.	1.5	66
74	Electron scale structures and magnetic reconnection signatures in the turbulent magnetosheath. Geophysical Research Letters, 2016, 43, 5969-5978.	1.5	92
75	Study of the spacecraft potential under active control and plasma density estimates during the MMS commissioning phase. Geophysical Research Letters, 2016, 43, 4858-4864.	1.5	13
76	Twoâ€scale ion meandering caused by the polarization electric field during asymmetric reconnection. Geophysical Research Letters, 2016, 43, 7831-7839.	1.5	19
77	Fast Plasma Investigation for Magnetospheric Multiscale. Space Science Reviews, 2016, 199, 331-406.	3.7	960
78	Electron-scale measurements of magnetic reconnection in space. Science, 2016, 352, aaf2939.	6.0	545
79	Electron dynamics in a subprotonâ€gyroscale magnetic hole. Geophysical Research Letters, 2016, 43, 4112-4118.	1.5	49
80	Transient, smallâ€scale fieldâ€aligned currents in the plasma sheet boundary layer during storm time substorms. Geophysical Research Letters, 2016, 43, 4841-4849.	1.5	30
81	Kinetic evidence of magnetic reconnection due to Kelvinâ€Helmholtz waves. Geophysical Research Letters, 2016, 43, 5635-5643.	1.5	47
82	Decay of mesoscale flux transfer events during quasiâ€continuous spatially extended reconnection at the magnetopause. Geophysical Research Letters, 2016, 43, 4755-4762.	1.5	28
83	Magnetic reconnection and modification of the Hall physics due to cold ions at the magnetopause. Geophysical Research Letters, 2016, 43, 6705-6712.	1.5	45
84	The substructure of a flux transfer event observed by the MMS spacecraft. Geophysical Research Letters, 2016, 43, 9434-9443.	1.5	33
85	The parameterization of microchannel-plate-based detection systems. Journal of Geophysical Research: Space Physics, 2016, 121, 10,005-10,018.	0.8	4
86	MMS observations of electronâ€scale filamentary currents in the reconnection exhaust and near the X line. Geophysical Research Letters, 2016, 43, 6060-6069.	1.5	99
87	MMS observations of large guide field symmetric reconnection between colliding reconnection jets at the center of a magnetic flux rope at the magnetopause. Geophysical Research Letters, 2016, 43, 5536-5544.	1.5	84
88	Observations of turbulence in a Kelvinâ€Helmholtz event on 8 September 2015 by the Magnetospheric Multiscale mission. Journal of Geophysical Research: Space Physics, 2016, 121, 11,021.	0.8	81
89	Strong current sheet at a magnetosheath jet: Kinetic structure and electron acceleration. Journal of Geophysical Research: Space Physics, 2016, 121, 9608-9618.	0.8	20
90	Magnetospheric Multiscale Mission observations and nonâ€force free modeling of a flux transfer event immersed in a superâ€Alfvénic flow. Geophysical Research Letters, 2016, 43, 6070-6077.	1.5	22

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91	Magnetospheric Multiscale observations of magnetic reconnection associated with Kelvinâ€Helmholtz waves. Geophysical Research Letters, 2016, 43, 5606-5615.	1.5	104
92	Thick escaping magnetospheric ion layer in magnetopause reconnection with MMS observations. Geophysical Research Letters, 2016, 43, 6028-6035.	1.5	1
93	lon demagnetization in the magnetopause current layer observed by MMS. Geophysical Research Letters, 2016, 43, 4850-4857.	1.5	12
94	Energy limits of electron acceleration in the plasma sheet during substorms: A case study with the Magnetospheric Multiscale (MMS) mission. Geophysical Research Letters, 2016, 43, 7785-7794.	1.5	51
95	Cold ion demagnetization near the Xâ€line of magnetic reconnection. Geophysical Research Letters, 2016, 43, 6759-6767.	1.5	35
96	Electron currents and heating in the ion diffusion region of asymmetric reconnection. Geophysical Research Letters, 2016, 43, 4691-4700.	1.5	53
97	Whistler mode waves and Hall fields detected by MMS during a dayside magnetopause crossing. Geophysical Research Letters, 2016, 43, 5943-5952.	1.5	44
98	Electron energization and mixing observed by MMS in the vicinity of an electron diffusion region during magnetopause reconnection. Geophysical Research Letters, 2016, 43, 6036-6043.	1.5	67
99	Estimates of terms in Ohm's law during an encounter with an electron diffusion region. Geophysical Research Letters, 2016, 43, 5918-5925.	1.5	86
100	Rippled Quasiperpendicular Shock Observed by the Magnetospheric Multiscale Spacecraft. Physical Review Letters, 2016, 117, 165101.	2.9	87
101	Extended magnetohydrodynamics with embedded particleâ€inâ€cell simulation of Ganymede's magnetosphere. Journal of Geophysical Research: Space Physics, 2016, 121, 1273-1293.	0.8	78
102	Spacecraft Observations and Analytic Theory of Crescent-Shaped Electron Distributions in Asymmetric Magnetic Reconnection. Physical Review Letters, 2016, 117, 185101.	2.9	42
103	Separator reconnection at the magnetopause for predominantly northward and southward IMF: Techniques and results. Journal of Geophysical Research: Space Physics, 2016, 121, 140-156.	0.8	34
104	Signatures of complex magnetic topologies from multiple reconnection sites induced by Kelvinâ€Helmholtz instability. Journal of Geophysical Research: Space Physics, 2016, 121, 9926-9939.	0.8	35
105	lonâ€scale structure in Mercury's magnetopause reconnection diffusion region. Geophysical Research Letters, 2016, 43, 5935-5942.	1.5	11
106	Shift of the magnetopause reconnection line to the winter hemisphere under southward IMF conditions: Geotail and MMS observations. Geophysical Research Letters, 2016, 43, 5581-5588.	1.5	17
107	Finite gyroradius effects in the electron outflow of asymmetric magnetic reconnection. Geophysical Research Letters, 2016, 43, 6724-6733.	1.5	37
108	Observation of highâ€frequency electrostatic waves in the vicinity of the reconnection ion diffusion region by the spacecraft of the Magnetospheric Multiscale (MMS) mission. Geophysical Research Letters, 2016, 43, 4808-4815.	1.5	32

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109	A telescopic and microscopic examination of acceleration in the June 2015 geomagnetic storm: Magnetospheric Multiscale and Van Allen Probes study of substorm particle injection. Geophysical Research Letters, 2016, 43, 6051-6059.	1.5	30
110	Mission Oriented Support and Theory (MOST) for MMSâ€"the Goddard Space Flight Center/University of California Los Angeles Interdisciplinary Science Program. Space Science Reviews, 2016, 199, 689-719.	3.7	5
111	The role of the Hall effect in the global structure and dynamics of planetary magnetospheres: Ganymede as a case study. Journal of Geophysical Research: Space Physics, 2015, 120, 5377-5392.	0.8	35
112	The calculation of moment uncertainties from velocity distribution functions with random errors. Journal of Geophysical Research: Space Physics, 2015, 120, 6633-6645.	0.8	34
113	A simple GPU-accelerated two-dimensional MUSCL-Hancock solver for ideal magnetohydrodynamics. Journal of Computational Physics, 2014, 259, 444-460.	1.9	8
114	Tracing magnetic separators and their dependence on IMF clock angle in global magnetospheric simulations. Journal of Geophysical Research: Space Physics, 2013, 118, 4998-5007.	0.8	36
115	Detection of Small-Scale Structures in the Dissipation Regime of Solar-Wind Turbulence. Physical Review Letters, 2012, 109, 191101.	2.9	116
116	The geometric factor of electrostatic plasma analyzers: A case study from the Fast Plasma Investigation for the Magnetospheric Multiscale mission. Review of Scientific Instruments, 2012, 83, 033303.	0.6	30
117	Is Quadrupole Structure of Out-of-Plane Magnetic Field Evidence for Hall Reconnection?. AIP Conference Proceedings, 2011, , .	0.3	3
118	Flux Pileup in Collisionless Magnetic Reconnection: Bursty Interaction of Large Flux Ropes. Physical Review Letters, 2011, 107, 025002.	2.9	56
119	On the generation and topology of flux transfer events. Journal of Geophysical Research, 2009, 114, .	3.3	58
120	Defining and identifying three-dimensional magnetic reconnection in resistive magnetohydrodynamic simulations of Earth's magnetosphere. Physics of Plasmas, 2008, 15, 056504.	0.7	23
121	Separator reconnection at Earth's dayside magnetopause under generic northward interplanetary magnetic field conditions. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	73
122	Plasma sheet formation during long period of northward IMF. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	78
123	Thin current sheets and loss of equilibrium: Three-dimensional theory and simulations. Journal of Geophysical Research, 2004, $109$ , .	3.3	27
124	The spherical tearing mode. Geophysical Research Letters, 2004, 31, .	1.5	7
125	A new look at driven magnetic reconnection at the terrestrial subsolar magnetopause. Journal of Geophysical Research, 2004, $109$ , .	3.3	36
126	Whistler-mediated magnetic reconnection in large systems: Magnetic flux pileup and the formation of thin current sheets. Journal of Geophysical Research, 2003, 108, .	3.3	51

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127	Electron heat flow in the solar corona: Implications of non-Maxwellian velocity distributions, the solar gravitational field, and Coulomb collisions. Journal of Geophysical Research, 2003, 108, .	3.3	22
128	Effects of Hall electric fields on the saturation of forced antiparallel magnetic field merging. Physics of Plasmas, 2003, 10, 3309-3314.	0.7	37
129	Electron magnetohydrodynamic simulations of magnetic island coalescence. Physics of Plasmas, 2001, 8, 4010-4019.	0.7	23
130	Electron heat flow carried by Kappa Distributions in the solar corona. Geophysical Research Letters, 1999, 26, 3537-3540.	1.5	21