

# Jessica A Mcbeck

## List of Publications by Year in descending order

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33  
papers

476  
citations

687363

13  
h-index

752698

20  
g-index

43  
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43  
docs citations

43  
times ranked

363  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic In Situ Three-Dimensional Imaging and Digital Volume Correlation Analysis to Quantify Strain Localization and Fracture Coalescence in Sandstone. <i>Pure and Applied Geophysics</i> , 2019, 176, 1083-1115.	1.9	57
2	Volumetric and shear processes in crystalline rock approaching faulting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 16234-16239.	7.1	56
3	Investigating the Onset of Strain Localization Within Anisotropic Shale Using Digital Volume Correlation of Time-Resolved X-ray Microtomography Images. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 7509-7528.	3.4	42
4	How Porosity Controls Macroscopic Failure via Propagating Fractures and Percolating Force Chains in Porous Granular Rocks. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 9920-9939.	3.4	24
5	Predicting the proximity to macroscopic failure using local strain populations from dynamic in situ X-ray tomography triaxial compression experiments on rocks. <i>Earth and Planetary Science Letters</i> , 2020, 543, 116344.	4.4	23
6	Deformation Precursors to Catastrophic Failure in Rocks. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL090255.	4.0	20
7	Volumetric and Shear Strain Localization in Mt. Etna Basalt. <i>Geophysical Research Letters</i> , 2019, 46, 2425-2433.	4.0	19
8	Volumetric and shear strain localization throughout triaxial compression experiments on rocks. <i>Tectonophysics</i> , 2022, 822, 229181.	2.2	18
9	Energy budget and propagation of faults via shearing and opening using work optimization. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 6757-6772.	3.4	17
10	Work Optimization Predicts Accretionary Faulting: An Integration of Physical and Numerical Experiments. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 7485-7505.	3.4	17
11	Mixed-Mode Strain Localization Generated by Hydration Reaction at Crustal Conditions. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 4507-4522.	3.4	15
12	Growth by Optimization of Work (GROW): A new modeling tool that predicts fault growth through work minimization. <i>Computers and Geosciences</i> , 2016, 88, 142-151.	4.2	14
13	Imaging strain localisation in porous andesite using digital volume correlation. <i>Journal of Volcanology and Geothermal Research</i> , 2020, 404, 107038.	2.1	14
14	Isolating the Factors That Govern Fracture Development in Rocks Throughout Dynamic In Situ X-ray Tomography Experiments. <i>Geophysical Research Letters</i> , 2019, 46, 11127-11135.	4.0	13
15	The competition between fracture nucleation, propagation, and coalescence in dry and water-saturated crystalline rock. <i>Solid Earth</i> , 2021, 12, 375-387.	2.8	13
16	Work Optimization Predicts the Evolution of Extensional Step Overs Within Anisotropic Host Rock: Implications for the San Pablo Bay, CA. <i>Tectonics</i> , 2017, 36, 2630-2646.	2.8	12
17	The influence of detachment strength on the evolving deformational energy budget of physical accretionary prisms. <i>Solid Earth</i> , 2018, 9, 1421-1436.	2.8	11
18	The evolving energy budget of experimental faults within continental crust: Insights from in situ dynamic X-ray microtomography. <i>Journal of Structural Geology</i> , 2019, 123, 42-53.	2.3	11

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19	Linking macroscopic failure with micromechanical processes in layered rocks: How layer orientation and roughness control macroscopic behavior. <i>Tectonophysics</i> , 2019, 750, 229-242.	2.2	11
20	Fracture Network Localization Preceding Catastrophic Failure in Triaxial Compression Experiments on Rocks. <i>Frontiers in Earth Science</i> , 2021, 9, .	1.8	10
21	Creep Burst Coincident With Faulting in Marble Observed in 4D Synchrotron X-Ray Imaging Triaxial Compression Experiments. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB020354.	3.4	9
22	Decrypting healed fault zones: how gouge production reduces the influence of fault roughness. <i>Geophysical Journal International</i> , 2021, 225, 759-774.	2.4	7
23	The influence of preexisting host rock damage on fault network localization. <i>Journal of Structural Geology</i> , 2021, 153, 104471.	2.3	6
24	Predicting Fracture Network Development in Crystalline Rocks. <i>Pure and Applied Geophysics</i> , 2022, 179, 275-299.	1.9	6
25	Synchrotron 4D X-Ray Imaging Reveals Strain Localization at the Onset of System-Size Failure in Porous Reservoir Rocks. <i>Pure and Applied Geophysics</i> , 0, , .	1.9	6
26	Competition between slow slip and damage on and off faults revealed in 4D synchrotron imaging experiments. <i>Tectonophysics</i> , 2020, 782-783, 228437.	2.2	5
27	Predicting the propagation and interaction of frontal accretionary thrust faults with work optimization. <i>Tectonophysics</i> , 2020, 786, 228461.	2.2	4
28	How the energy budget scales from the laboratory to the crust in accretionary wedges. <i>Earth and Planetary Science Letters</i> , 2020, 541, 116276.	4.4	4
29	4D Synchrotron X-ray Imaging of Grain Scale Deformation Mechanisms in a Seismogenic Gas Reservoir Sandstone During Axial Compaction. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 4697-4715.	5.4	4
30	Predicting fault reactivation and macroscopic failure in discrete element method simulations of restraining and releasing step overs. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117667.	4.4	3
31	How the force and fracture architectures develop within and around healed fault zones during biaxial loading toward macroscopic failure. <i>Journal of Structural Geology</i> , 2021, 147, 104329.	2.3	2
32	The Influence of Fracture Growth and Coalescence on the Energy Budget Leading to Failure. <i>Frontiers in Earth Science</i> , 2022, 10, .	1.8	2
33	TRACKING EFFICIENCY ASSOCIATED WITH FAULT SYSTEM REORGANIZATION IN LABORATORY AND NUMERICAL EXPERIMENTS. , 2017, , .		0