

# Michael B Prime

## List of Publications by Year in descending order

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68  
papers

3,298  
citations

236612

25  
h-index

155451

55  
g-index

77  
all docs

77  
docs citations

77  
times ranked

1546  
citing authors

#	ARTICLE	IF	CITATIONS
1	A broad study of tantalum strength from ambient to extreme conditions. Acta Materialia, 2022, 231, 117875.	3.8	16
2	Interlaboratory Reproducibility of Contour Method Data in a High Strength Aluminum Alloy. Experimental Mechanics, 2022, 62, 1319-1331.	1.1	3
3	Saver: A Peak Velocity Extraction Program for Advanced Photonic Doppler Velocimetry Analysis. Journal of Dynamic Behavior of Materials, 2021, 7, 510-517.	1.1	4
4	Complementary Measurements of Residual Stresses Before and After Base Plate Removal in an Intricate Additively-Manufactured Stainless-Steel Valve Housing. Additive Manufacturing, 2020, 36, 101555.	1.7	7
5	Experimental evaluation of shear modulus scaling of dynamic strength at extreme pressures. Journal of Applied Physics, 2020, 128, .	1.1	17
6	Interlaboratory Reproducibility of Contour Method Data Analysis and Residual Stress Calculation. Experimental Mechanics, 2020, 60, 833-845.	1.1	3
7	Tantalum strength at extreme strain rates from impact-driven Richtmyer-Meshkov instabilities. Physical Review E, 2019, 100, 053002.	0.8	25
8	Directional and oscillating residual stress on the mesoscale in additively manufactured Ti-6Al-4V. Acta Materialia, 2019, 168, 299-308.	3.8	62
9	Estimates of Ta strength at ultrahigh pressures and strain rates using thin-film graded-density impactors. Physical Review B, 2019, 99, .	1.1	10
10	Improved Richtmyer-Meshkov Instability Experiments for Very-High-Rate Strength and Application to Tantalum. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 101-104.	0.3	0
11	Evaluation of a self-equilibrium cutting strategy for the contour method of residual stress measurement. International Journal of Pressure Vessels and Piping, 2018, 164, 22-31.	1.2	10
12	Strain Rate Sensitivity of Richtmyer-Meshkov Instability Experiments for Metal Strength. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 13-16.	0.3	1
13	Amplified effect of mild plastic anisotropy on residual stress and strain anisotropy. International Journal of Solids and Structures, 2017, 118-119, 70-77.	1.3	14
14	Estimation of Metal Strength at Very High Rates Using Free-Surface Richtmyer-Meshkov Instabilities. Journal of Dynamic Behavior of Materials, 2017, 3, 189-202.	1.1	39
15	Yield strength of Cu and a CuPb alloy (1% Pb). AIP Conference Proceedings, 2017, , .	0.3	4
16	Residual Stress Measurement of Full-Scale Jet-Engine Bearing Elements Using the Contour Method. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 69-81.	0.3	1
17	Mitigating cutting-induced plasticity in the contour method. Part 2: Numerical analysis. International Journal of Solids and Structures, 2016, 94-95, 254-262.	1.3	22
18	Contour Method Residual Stress Measurement Uncertainty in a Quenched Aluminum Bar and a Stainless Steel Welded Plate. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 303-312.	0.3	1

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19	Using Richtmyer–Meshkov Instabilities to Estimate Metal Strength at Very High Rates. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 191-197.	0.3	4
20	Jet formation in cerium metal to examine material strength. Journal of Applied Physics, 2015, 118, .	1.1	41
21	Estimation of Uncertainty for Contour Method Residual Stress Measurements. Experimental Mechanics, 2015, 55, 577-585.	1.1	53
22	Slitting Method Measurement of Residual Stress Profiles, Including Stress Discontinuities, in Layered Specimens. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 93-102.	0.3	13
23	Using growth and arrest of Richtmyer-Meshkov instabilities and Lagrangian simulations to study high-rate material strength. Journal of Physics: Conference Series, 2014, 500, 112051.	0.3	14
24	Forensic determination of residual stresses and KI from fracture surface mismatch. Engineering Fracture Mechanics, 2014, 116, 158-171.	2.0	17
25	Three-Dimensional Constraint Effects on the Slitting Method for Measuring Residual Stress. Journal of Engineering Materials and Technology, Transactions of the ASME, 2013, 135, .	0.8	16
26	Residual Stress Characterization in a Dissimilar Metal Weld Nuclear Reactor Piping System Mock Up. Journal of Pressure Vessel Technology, Transactions of the ASME, 2013, 135, .	0.4	12
27	Advanced plasticity models applied to recent shock data on beryllium. , 2012, , .		1
28	Characterization of shocked beryllium. EPJ Web of Conferences, 2012, 26, 01009.	0.1	9
29	Assessment of Residual Stress in Fracture Mechanics Coupons. , 2011, , .		2
30	Measuring Inaccessible Residual Stresses Using Multiple Methods and Superposition. Experimental Mechanics, 2011, 51, 1123-1134.	1.1	98
31	Critical comparison of two independent measurements of residual stress in an electron-beam welded uranium cylinder: Neutron diffraction and the contour method. Acta Materialia, 2011, 59, 864-873.	3.8	58
32	Characterization of a Plate Specimen From Phase I of the NRC/EPRI Weld Residual Stress Program. , 2011, , .		0
33	The Contour Method Cutting Assumption: Error Minimization and Correction. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 233-250.	0.3	33
34	Contour Method Advanced Applications: Hoop Stresses in Cylinders and Discontinuities. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 13-28.	0.3	11
35	Measurements of Residual Stress in Fracture Mechanics Coupons. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 251-257.	0.3	0
36	Measuring Multiple Residual-Stress Components using the Contour Method and Multiple Cuts. Experimental Mechanics, 2010, 50, 187-194.	1.1	124

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37	Plasticity effects in incremental slitting measurement of residual stresses. Engineering Fracture Mechanics, 2010, 77, 1552-1566.	2.0	43
38	Known Residual Stress Specimens Using Opposed Indentation. Journal of Engineering Materials and Technology, Transactions of the ASME, 2009, 131, .	0.8	24
39	The Eighth International Conference on Residual Stresses. Powder Diffraction, 2009, 24, S1-S2.	0.4	0
40	Assessment of Corrosion-Based Failure in Stainless Steel Containers Used for the Long-Term Storage of Plutonium-Based Salts. Corrosion, 2009, 65, 175-186.	0.5	8
41	Microstructure, texture and residual stress in a friction-stir-processed AZ31B magnesium alloy. Acta Materialia, 2008, 56, 1701-1711.	3.8	174
42	Residual Stress Solution Extrapolation for the Slitting Method Using Equilibrium Constraints. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 227-232.	0.8	40
43	Editorial for special issue on residual stress in fatigue & fracture. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 172-172.	1.7	0
44	Validation Specimen for Contour Method Extension to Multiple Residual Stress Components. , 2007, , 635-636.		2
45	Use of Inverse Solutions for Residual Stress Measurements. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 375.	0.8	181
46	Uncertainty, Model Error, and Order Selection for Series-Expanded, Residual-Stress Inverse Solutions. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 175-185.	0.8	106
47	Residual stresses in LENSÂ® components using neutron diffraction and contour method. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 399, 72-83.	2.6	193
48	Measurement of Fiber-scale Residual Stress Variation in a Metal-matrix Composite. Journal of Composite Materials, 2004, 38, 2079-2095.	1.2	37
49	Erratum to "Laser surface-contouring and spline data-smoothing for residual stress measurement", Experimental Mechanics, 2004, 44, 541-541.	1.1	1
50	Laser surface-contouring and spline data-smoothing for residual stress measurement. Experimental Mechanics, 2004, 44, 176-184.	1.1	157
51	Penetration of HSLA-100 steel with tungsten carbide spheres at striking velocities between 0.8 and 2.5km/s. International Journal of Impact Engineering, 2004, 30, 505-520.	2.4	26
52	Laser surface-contouring and spline data-smoothing for residual stress measurement. , 2004, 44, 176.		13
53	Erratum to "Laser Surface-contouring and Spline Data-smoothing for Residual Stress Measurement". Experimental Mechanics, 2004, 44, 541-541.	1.1	2
54	Residual stresses in continuous-tungsten-fibre-reinforced Kanthal-matrix composites. Philosophical Magazine, 2003, 83, 2267-2292.	0.7	6

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55	Modeling and measurement of residual stresses in a bulk metallic glass plate. Journal of Non-Crystalline Solids, 2003, 316, 82-95.	1.5	50
56	Quenching and Cold-Work Residual Stresses in Aluminum Hand Forgings: Contour Method Measurement and FEM Prediction. Materials Science Forum, 2003, 426-432, 435-440.	0.3	46
57	The Measurement of Residual Stress in Railway Rails by Diffraction and other Methods *. Journal of Neutron Research, 2003, 11, 187-193.	0.4	75
58	Mapping Residual Stresses after Foreign Object Damage Using the Contour Method. Materials Science Forum, 2002, 404-407, 521-526.	0.3	16
59	Residual stress, stress relief, and inhomogeneity in aluminum plate. Scripta Materialia, 2002, 46, 77-82.	2.6	226
60	Cross-Sectional Mapping of Residual Stresses by Measuring the Surface Contour After a Cut. Journal of Engineering Materials and Technology, Transactions of the ASME, 2001, 123, 162-168.	0.8	535
61	Residual Stress Measurement and Prediction in a Hardened Steel Ring. Materials Science Forum, 2000, 347-349, 223-228.	0.3	25
62	Residual Stress Measurement by Successive Extension of a Slot: The Crack Compliance Method. Applied Mechanics Reviews, 1999, 52, 75-96.	4.5	335
63	Comparison of residual strains measured by X-ray and neutron diffraction in a titanium (Ti-6Al-4V) matrix composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 259, 209-219.	2.6	52
64	Surface Strains Due to Face Loading of a Slot in a Layered Half-Space. Journal of Engineering Materials and Technology, Transactions of the ASME, 1996, 118, 410-418.	0.8	5
65	Measurement of Near Surface Residual Stresses Using Electric Discharge Wire Machining. Journal of Engineering Materials and Technology, Transactions of the ASME, 1994, 116, 1-7.	0.8	54
66	The Compliance Method for Measurement of Near Surface Residual Stresses—Analytical Background. Journal of Engineering Materials and Technology, Transactions of the ASME, 1994, 116, 550-555.	0.8	26
67	Beyond the Streetlight Effect: A United Future for Relaxation and Diffraction Methods for Residual Stress Measurement. Advanced Materials Research, 0, 996, 234-242.	0.3	3
68	Residual Stress Measurements in Extreme Environments for Hazardous, Layered Specimens. Experimental Mechanics, 0, , 1.	1.1	0