

# Anish Roy

## List of Publications by Year in descending order

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159  
papers

3,222  
citations

172207

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197535

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162  
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162  
docs citations

162  
times ranked

2889  
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical modelling of size effects in micro-cutting of f.c.c. single crystal: Influence of strain gradients. <i>Journal of Manufacturing Processes</i> , 2022, 74, 511-519.	2.8	3
2	Challenges and issues in continuum modelling of tribology, wear, cutting and other processes involving high-strain rate plastic deformation of metals. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 130, 105185.	1.5	6
3	Hybrid-hybrid machining of SiC-reinforced aluminium metal matrix composite. <i>Manufacturing Letters</i> , 2022, 32, 63-66.	1.1	15
4	Ultrasonically Assisted Cutting of Histological Sections for Reducing the Environmental and Financial Impact of Microtomy. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2022, 35, .	1.9	0
5	Analytical prediction of shear angle and frictional behaviour in vibration-assisted cutting. <i>Journal of Manufacturing Processes</i> , 2021, 62, 37-46.	2.8	17
6	Impact of polyurea-coated metallic targets: Computational framework. <i>Composite Structures</i> , 2021, 267, 113893.	3.1	12
7	Unprecedented hardness of polycrystalline diamond via laser surface engineering. <i>Surface and Coatings Technology</i> , 2021, 419, 127302.	2.2	3
8	A numerical study on influence of strain gradients on lattice rotation in micro-machining of a single crystal. <i>Challenge Journal of Structural Mechanics</i> , 2021, 7, 117.	0.2	0
9	Simulations of Machining Processes at Small Spatio-temporal Scales. , 2021, , 241-254.		0
10	Ice vs. steel: Ballistic impact of woven carbon/epoxy composites. Part I " Deformation and damage behaviour. <i>Engineering Fracture Mechanics</i> , 2020, 225, 106270.	2.0	7
11	Production of high-quality extremely-thin histological sections by ultrasonically assisted cutting. <i>Journal of Materials Processing Technology</i> , 2020, 276, 116403.	3.1	6
12	Ice vs. steel: Ballistic impact of woven carbon/epoxy composites. Part II " Numerical modelling. <i>Engineering Fracture Mechanics</i> , 2020, 225, 106297.	2.0	9
13	Finite element simulations of conventional and ultrasonically assisted turning processes with plane and textured cutting inserts. <i>Journal of Micromanufacturing</i> , 2020, 3, 54-68.	0.6	2
14	Nanoscale investigation of deformation characteristics in a polycrystalline silicon carbide. <i>Journal of the Australian Ceramic Society</i> , 2020, 56, 951-967.	1.1	2
15	Modelling strain localization in Ti"6Al"4V at high loading rate: a phenomenological approach. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190105.	1.6	2
16	Comprehensive experimental analysis and sustainability assessment of machining Nimonic 90 using ultrasonic-assisted turning facility. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 109, 1447-1462.	1.5	26
17	Machining in monocrystals. , 2020, , 243-267.		0
18	Modeling of friction in manufacturing processes. , 2020, , 415-444.		8

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19	Shear band widening mechanism in Ti-6Al-4V under high strain rate deformation. Journal of Materials Research, 2020, 35, 1623-1634.	1.2	3
20	Mechanics of ultrasonically assisted drilling. , 2020, , 229-241.		0
21	A multiscale-indentation study of deformation and fracture in 6H polycrystalline silicon carbide. Materials Science and Technology, 2020, 36, 1111-1124.	0.8	4
22	Polyurea-coated glass-fibre-reinforced laminate under high-speed impact: experimental study. Procedia Structural Integrity, 2020, 28, 1572-1578.	0.3	3
23	Ballistic performance of polyurea-coated thin aluminium plates: numerical study. Procedia Structural Integrity, 2020, 28, 1258-1266.	0.3	0
24	Deformation Characteristics in Micromachining of Single Crystal 6H-SiC: Insight into Slip Systems Activation. Journal of Mechanics, 2020, 36, 245-253.	0.7	2
25	Mechanical Behavior of Silicon Carbide Under Static and Dynamic Compression. Journal of Engineering Materials and Technology, Transactions of the ASME, 2019, 141, .	0.8	10
26	Ultrasonically assisted drilling in marble. Journal of Sound and Vibration, 2019, 460, 114880.	2.1	8
27	A crystal-plasticity model of extruded AM30 magnesium alloy. Computational Materials Science, 2019, 170, 109140.	1.4	11
28	Hybrid machining of metal-matrix composite. Procedia CIRP, 2019, 82, 184-189.	1.0	28
29	Machinability of natural-fibre-reinforced polymer composites: Conventional vs ultrasonically-assisted machining. Composites Part A: Applied Science and Manufacturing, 2019, 119, 188-195.	3.8	58
30	Enhanced machinability of SiC-reinforced metal-matrix composite with hybrid turning. Journal of Materials Processing Technology, 2019, 268, 149-161.	3.1	86
31	Single Trapped <sup>171</sup> Yb <sup>+</sup> for Optical Frequency Standards. , 2019, , .		0
32	Multi-objective optimization of ultrasonic-assisted magnetic abrasive finishing process. International Journal of Advanced Manufacturing Technology, 2019, 101, 1661-1670.	1.5	18
33	In-situ SEM study of slip-controlled short-crack growth in single-crystal nickel superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 564-572.	2.6	47
34	Low-cycle fatigue of single crystal nickel-based superalloy – mechanical testing and TEM characterisation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 538-547.	2.6	43
35	Coupling crystal plasticity and continuum damage mechanics for creep assessment in Cr-based power-plant steel. Mechanics of Materials, 2019, 130, 29-38.	1.7	25
36	A new type of RPC with very low resistive material. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 424-426.	0.7	2

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37	Improvements of machinability of aerospace-grade Inconel alloys with ultrasonically assisted hybrid machining. International Journal of Advanced Manufacturing Technology, 2019, 101, 1143-1156.	1.5	30
38	Modeling of finishing force and torque in ultrasonic-assisted magnetic abrasive finishing process. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2019, 233, 411-425.	1.5	14
39	Deformation response and microstructural evolution of as-cast Mg alloys AM30 and AM50 during hot compression. International Journal of Materials Research, 2019, 110, 524-533.	0.1	4
40	Small-Scale Machining Simulations. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 349-362.	0.4	0
41	Initiation and growth of short cracks in a nickel-based single crystal superalloy. , 2019, , 388-391.		0
42	Vibration-assisted robotic machining in advanced materials. , 2019, , 408-409.		0
43	Deformation characteristics in 6H silicon carbide “ effects of length scale and irradiation. , 2019, , 371-374.		0
44	The provision of care to adults with an intellectual disability in the UK. A Special report from the intellectual disability UK chapter ILAE. Seizure: the Journal of the British Epilepsy Association, 2018, 56, 41-46.	0.9	15
45	Ultrasonic Assisted Turning: A Comparative Study of Surface Integrity. Lecture Notes on Multidisciplinary Industrial Engineering, 2018, , 337-360.	0.4	0
46	Experimental studies of shear bands in Zr-Cu metallic glass. Journal of Non-Crystalline Solids, 2018, 484, 40-48.	1.5	14
47	3D DDD modelling of dislocation“precipitate interaction in a nickel-based single crystal superalloy under cyclic deformation. Philosophical Magazine, 2018, 98, 1550-1575.	0.7	10
48	Indentation in single-crystal 6H silicon carbide: Experimental investigations and finite element analysis. International Journal of Mechanical Sciences, 2018, 144, 858-864.	3.6	20
49	Effect of hybrid machining on structural integrity of aerospace-grade materials. Procedia CIRP, 2018, 77, 163-166.	1.0	3
50	Ultrasonically assisted drilling of aerospace CFRP/Ti stacks. Procedia CIRP, 2018, 77, 383-386.	1.0	27
51	Relations between Parameters of Fracture Processes on Different Scale Levels. Doklady Physics, 2018, 63, 459-461.	0.2	0
52	Ultrasonically assisted drilling of rocks. AIP Conference Proceedings, 2018, , .	0.3	4
53	Importance of d-wave contributions in the charge symmetry breaking reaction $dd\hat{t}^*4He\check{t}0$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 781, 645-650.	1.5	3
54	Hybrid machining process: experimental and numerical analysis of hot ultrasonically assisted turning. International Journal of Advanced Manufacturing Technology, 2018, 97, 2173-2192.	1.5	21





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91	Effect of Machining on Shear-Zone Microstructure in Ti-15V-3Cr-3Al-3Sn: Conventional and Ultrasonically Assisted Turning. <i>Journal of Materials Engineering and Performance</i> , 2016, 25, 3766-3773.	1.2	7
92	Measurements of branching ratios for $\pi^0$ decays into charged particles. <i>Physical Review C</i> , 2016, 94, .	1.1	12
93	Measurement of the $\sigma_{\text{pion}}^{\text{pion}}$ reaction with polarized beam in the region of the $d^*(2380)$ resonance. <i>European Physical Journal A</i> , 2016, 52, 1.	1.0	21
94	Data set for diet specific differential gene expression analysis in three <i>Spodoptera</i> moths. <i>Data in Brief</i> , 2016, 8, 448-455.	0.5	1
95	Diet dependent metabolic responses in three generalist insect herbivores <i>Spodoptera</i> spp. <i>Insect Biochemistry and Molecular Biology</i> , 2016, 71, 91-105.	1.2	81
96	Dynamic damage in FRPs. , 2016, , 193-222.		1
97	Strain-gradient crystal-plasticity modelling of micro-cutting of b.c.c. single crystal. <i>Meccanica</i> , 2016, 51, 371-381.	1.2	11
98	Variation of cutting forces in machining of f.c.c. single crystals. <i>Acta Mechanica</i> , 2016, 227, 3-9.	1.1	6
99	Analysis of tool wear in ultrasonically assisted turning of Ti-15V-3Al-3Cr-3Sn alloy. <i>Scientia Iranica</i> , 2016, 23, 1800-1810.	0.3	4
100	Ballistic damage in hybrid composite laminates. <i>Journal of Physics: Conference Series</i> , 2015, 628, 012092.	0.3	3
101	Shear strength and fracture toughness of carbon fibre/epoxy interface: effect of surface treatment. <i>Materials and Design</i> , 2015, 85, 800-807.	3.3	67
102	Modelling of Vibration Assisted Machining f.c.c Single Crystal. <i>Procedia CIRP</i> , 2015, 31, 393-398.	1.0	12
103	Bulk Metallic Glasses: Mechanical Properties and Performance. <i>Engineering Materials</i> , 2015, , 101-134.	0.3	0
104	Crystalline Deformation in the Small Scale. <i>Engineering Materials</i> , 2015, , 23-42.	0.3	0
105	Influence of strain gradients on lattice rotation in nano-indentation experiments: A numerical study. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 608, 73-81.	2.6	16
106	Indentation-induced deformation localisation in Zr-Cu-based metallic glass. <i>Journal of Alloys and Compounds</i> , 2014, 615, S93-S97.	2.8	5
107	Ti Alloy with Enhanced Machinability in UAT Turning. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 2768-2775.	1.1	9
108	Thermally enhanced ultrasonically assisted machining of Ti alloy. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2014, 7, 159-167.	2.3	47

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109	Numerical modelling of micro-machining of f.c.c. single crystal: Influence of strain gradients. Computational Materials Science, 2014, 94, 273-278.	1.4	23
110	Effect of ultrasonically-assisted drilling on carbon-fibre-reinforced plastics. Journal of Sound and Vibration, 2014, 333, 5939-5952.	2.1	102
111	Analysis of a free machining $\hat{1}\pm\hat{1}^2$ titanium alloy using conventional and ultrasonically assisted turning. Journal of Materials Processing Technology, 2014, 214, 906-915.	3.1	82
112	Optimising curvature of carbon fibre-reinforced polymer composite panel for improved blast resistance: Finite-element analysis. Materials & Design, 2014, 57, 719-727.	5.1	30
113	Surface-roughness Improvement in Ultrasonically Assisted Turning. Procedia CIRP, 2014, 13, 49-54.	1.0	47
114	Ultrasonically Assisted Machining of Titanium Alloys. Materials Forming, Machining and Tribology, 2014, , 131-147.	0.7	7
115	Modeling of Micro-machining Single-crystal f.c.c. Metals. Procedia CIRP, 2013, 8, 346-350.	1.0	18
116	FE/SPH modelling of orthogonal micro-machining of f.c.c. single crystal. Computational Materials Science, 2013, 78, 104-109.	1.4	61
117	Indentation studies in b.c.c. crystals with enhanced model of strain-gradient crystal plasticity. Computational Materials Science, 2013, 79, 896-902.	1.4	20
118	A Finite Element Model of Ultrasonically Assisted Drilling in Carbon/Epoxy Composites. Procedia CIRP, 2013, 8, 141-146.	1.0	41
119	Finite Element Modelling of Conventional and Hybrid Oblique Turning Processes of Titanium Alloy. Procedia CIRP, 2013, 8, 510-515.	1.0	19
120	Enhanced ultrasonically assisted turning of a $\hat{1}^2$ -titanium alloy. Ultrasonics, 2013, 53, 1242-1250.	2.1	87
121	Drilling in carbon/epoxy composites: Experimental investigations and finite element implementation. Composites Part A: Applied Science and Manufacturing, 2013, 47, 41-51.	3.8	234
122	Blast response of curved carbon/epoxy composite panels: Experimental study and finite-element analysis. Journal of Physics: Conference Series, 2013, 451, 012018.	0.3	2
123	Ballistic impact behaviour of woven fabric composite: Finite element analysis and experiments. Journal of Physics: Conference Series, 2013, 451, 012019.	0.3	12
124	Modelling the dynamic behaviour of hard-to-cut alloys under conditions of vibro-impact cutting. Journal of Physics: Conference Series, 2013, 451, 012030.	0.3	3
125	Quasi-static and dynamic deformation behaviour of Zr-based bulk metallic glass. Journal of Physics: Conference Series, 2013, 451, 012009.	0.3	0
126	Ultrasonically assisted drilling: A finite-element model incorporating acoustic softening effects. Journal of Physics: Conference Series, 2013, 451, 012040.	0.3	2

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127	Vibration-assisted machining of single crystal. Journal of Physics: Conference Series, 2013, 451, 012038.	0.3	3
128	Indentation in F.C.C. Single Crystals. Solid State Phenomena, 2012, 188, 219-225.	0.3	8
129	Cutting forces in ultrasonically assisted drilling of carbon fibre-reinforced plastics. Journal of Physics: Conference Series, 2012, 382, 012019.	0.3	25
130	Ultrasonically Assisted Drilling of Carbon Fibre Reinforced Plastics. Solid State Phenomena, 2012, 188, 170-175.	0.3	16
131	Drilling-Induced Damage in CFRP Laminates: Experimental and Numerical Analysis. Solid State Phenomena, 2012, 188, 150-157.	0.3	6
132	Turning of Advanced Alloys with Vibrating Cutting Tool. Solid State Phenomena, 2012, 188, 277-284.	0.3	15
133	Ultrasonically assisted turning of Ti-6Al-2Sn-4Zr-6Mo. Journal of Physics: Conference Series, 2012, 382, 012016.	0.3	8
134	Finite element analysis of drilling in carbon fiber reinforced polymer composites. Journal of Physics: Conference Series, 2012, 382, 012014.	0.3	22
135	Application of Smooth-Particle Hydrodynamics in Metal Machining. Journal of Physics: Conference Series, 2012, 382, 012017.	0.3	5
136	Numerical analysis and noise detection for design optimisation of an ultrasonic transducer. Journal of Physics: Conference Series, 2012, 382, 012062.	0.3	1
137	Comparing Machinability of Ti-15-3-3-3 and Ni-625 Alloys in Ulat. Procedia CIRP, 2012, 1, 330-335.	1.0	45
138	Hot Ultrasonically Assisted Turning of $\hat{\imath}^2$ -Ti Alloy. Procedia CIRP, 2012, 1, 336-341.	1.0	40
139	Numerical Modelling of Vibration-Assisted Turning of Ti-15333. Procedia CIRP, 2012, 1, 347-352.	1.0	28
140	Experimental and Numerical Investigations in Conventional and Ultrasonically Assisted Drilling of CFRP Laminate. Procedia CIRP, 2012, 1, 455-459.	1.0	58
141	Plastic deformation of multicrystalline thin films: Grain size distribution vs. grain orientation. Computational Materials Science, 2012, 52, 20-24.	1.4	6
142	Computational Study of Ultrasonically-Assisted Turning of Ti Alloys. Advanced Materials Research, 2011, 223, 30-36.	0.3	24
143	Repetitive indentation of Ti-based alloys: A numerical study. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012105.	0.3	1
144	Higher-Order Mesoscopic Theories of Plasticity Based on Discrete Dislocation Interactions. Advances in Mechanics and Mathematics, 2010, , 245-250.	0.2	0

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145	Modeling dislocation sources and size effects at initial yield in continuum plasticity. Journal of Mechanics of Materials and Structures, 2009, 4, 1603-1618.	0.4	14
146	Continuum modeling of dislocation interactions: Why discreteness matters?. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 486, 653-661.	2.6	49
147	Phenomenological mesoscopic field dislocation mechanics, lower-order gradient plasticity, and transport of mean excess dislocation density. Modelling and Simulation in Materials Science and Engineering, 2007, 15, S167-S180.	0.8	21
148	Size effects and idealized dislocation microstructure at small scales: Predictions of a Phenomenological model of Mesoscopic Field Dislocation Mechanics: Part II. Journal of the Mechanics and Physics of Solids, 2006, 54, 1711-1743.	2.3	78
149	Size effects and idealized dislocation microstructure at small scales: Predictions of a Phenomenological model of Mesoscopic Field Dislocation Mechanics: Part I. Journal of the Mechanics and Physics of Solids, 2006, 54, 1687-1710.	2.3	138
150	Continuum theory and methods for coarse-grained, mesoscopic plasticity. Scripta Materialia, 2006, 54, 705-710.	2.6	25
151	Finite element approximation of field dislocation mechanics. Journal of the Mechanics and Physics of Solids, 2005, 53, 143-170.	2.3	108
152	Finite-Element Simulations of Split Hopkinson Test of Ti-Based Alloy. Advanced Materials Research, 0, 223, 296-303.	0.3	6
153	Analysis of Forces in Vibro-Impact and Hot Vibro-Impact Turning of Advanced Alloys. Applied Mechanics and Materials, 0, 70, 315-320.	0.2	21
154	Dynamic Behavior of Advanced Ti Alloy under Impact Loading: Experimental and Numerical Analysis. Applied Mechanics and Materials, 0, 70, 207-212.	0.2	0
155	Analysis of Machinability of Ti- and Ni-Based Alloys. Solid State Phenomena, 0, 188, 330-338.	0.3	19
156	Effect of Plate Curvature on Blast Response of Carbon/Epoxy Composite. Key Engineering Materials, 0, 569-570, 41-48.	0.4	1
157	Ultrasonically Assisted Drilling: Machining towards Improved Structural Integrity in Carbon/Epoxy Composites. Key Engineering Materials, 0, 569-570, 49-55.	0.4	5
158	Analysis of delamination of composite laminates via extended finite element method based on the layerwise displacement theory and cohesive zone method. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 0, , 146442072110461.	0.7	0
159	A study on the effectiveness of explosive reactive armour against the penetration of long-rod projectiles. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 0, , 095440622210814.	1.1	0