

Sriram Sundararajan

List of Publications by Citations

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69
papers

1,606
citations

21
h-index

39
g-index

80
ext. papers

1,773
ext. citations

3.7
avg, IF

4.89
L-index

#	Paper	IF	Citations
69	Development of AFM-based techniques to measure mechanical properties of nanoscale structures. <i>Sensors and Actuators A: Physical</i> , 2002 , 101, 338-351	3.9	161
68	Topography-induced contributions to friction forces measured using an atomic force/friction force microscope. <i>Journal of Applied Physics</i> , 2000 , 88, 4825	2.5	116
67	Micro/nanotribological studies of polysilicon and SiC films for MEMS applications. <i>Wear</i> , 1998 , 217, 251-261	3.6	112
66	Micro/nanotribology of ultra-thin hard amorphous carbon coatings using atomic force/friction force microscopy. <i>Wear</i> , 1999 , 225-229, 678-689	3.5	103
65	Friction and wear behavior of ultra-high molecular weight polyethylene as a function of polymer crystallinity. <i>Acta Biomaterialia</i> , 2008 , 4, 1401-10	10.8	97
64	Mechanical property measurements of nanoscale structures using an atomic force microscope. <i>Ultramicroscopy</i> , 2002 , 91, 111-8	3.1	85
63	Static friction and surface roughness studies of surface micromachined electrostatic micromotors using an atomic force/friction force microscope. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 1777-1785	2.9	82
62	Development of a continuous microscratch technique in an atomic force microscope and its application to study scratch resistance of ultrathin hard amorphous carbon coatings. <i>Journal of Materials Research</i> , 2001 , 16, 437-445	2.5	76
61	Superhydrophobic coatings on Portland cement concrete surfaces. <i>Construction and Building Materials</i> , 2017 , 141, 393-401	6.7	66
60	A test method for determining adhesion forces and Hamaker constants of cementitious materials using atomic force microscopy. <i>Cement and Concrete Research</i> , 2011 , 41, 1157-1166	10.3	55
59	The effect of heat treatment routes on the retained austenite and Tribomechanical properties of carburized AISI 8620 steel. <i>Surface and Coatings Technology</i> , 2016 , 308, 236-243	4.4	41
58	Synthesis and Physical Properties of Potential Biolubricants based on Ricinoleic Acid. <i>JAACS, Journal of the American Oil Chemists Society</i> , 2010 , 87, 937-945	1.8	40
57	The effect of protein adsorption on the friction behavior of ultra-high molecular weight polyethylene. <i>Tribology Letters</i> , 2006 , 22, 181-188	2.8	39
56	Effect of microfabrication processes on surface roughness parameters of silicon surfaces. <i>Surface and Coatings Technology</i> , 2004 , 188-189, 581-587	4.4	32
55	Iterative control approach to high-speed force-distance curve measurement using AFM: time-dependent response of PDMS example. <i>Ultramicroscopy</i> , 2008 , 108, 911-20	3.1	29
54	Investigating the effect of retained austenite and residual stress on rolling contact fatigue of carburized steel with XFEM and experimental approaches. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 732, 311-319	5.3	28
53	Nanoscale friction switches: friction modulation of monomolecular assemblies using external electric fields. <i>Langmuir</i> , 2009 , 25, 12114-9	4	25

52	Comparison of the effect of surface roughness on the micro/nanotribological behavior of ultra-high-molecular-weight polyethylene (UHMWPE) in air and bovine serum solution. <i>Journal of Biomedical Materials Research - Part A</i> , 2005 , 74, 687-95	5.4	25
51	The effect of autocorrelation length on the real area of contact and friction behavior of rough surfaces. <i>Journal of Applied Physics</i> , 2005 , 97, 103526	2.5	22
50	Effect of laser treatment parameters on surface modification and tribological behavior of AISI 8620 steel. <i>Tribology International</i> , 2017 , 112, 94-102	4.9	21
49	Tribological behavior and wettability of spray-coated superhydrophobic coatings on aluminum. <i>Wear</i> , 2017 , 376-377, 1713-1719	3.5	21
48	Micro/Nanotribological Studies of Single-Crystal Silicon and Polysilicon and SiC Films for Use in MEMS Devices 1998 , 407-430		21
47	The effect of contact pressure and surface texture on running-in behavior of case carburized steel under boundary lubrication. <i>Wear</i> , 2017 , 376-377, 851-857	3.5	18
46	Correlation between evolution of surface roughness parameters and micropitting of carburized steel under boundary lubrication condition. <i>Surface and Coatings Technology</i> , 2018 , 350, 445-452	4.4	18
45	Effect of retained austenite on micropitting behavior of carburized AISI 8620 steel under boundary lubrication. <i>Materialia</i> , 2018 , 3, 192-201	3.2	17
44	Visualization by atomic force microscopy and FISH of the 45S rDNA gaps in mitotic chromosomes of <i>Lolium perenne</i> . <i>Protoplasma</i> , 2009 , 236, 59-65	3.4	16
43	Generating random surfaces with desired autocorrelation length. <i>Applied Physics Letters</i> , 2006 , 88, 141903	3.4	16
42	Effect of retained austenite on spalling behavior of carburized AISI 8620 steel under boundary lubrication. <i>International Journal of Fatigue</i> , 2019 , 119, 238-246	5	16
41	Investigating the micropitting and wear performance of copper oxide and tungsten carbide nanofluids under boundary lubrication. <i>Wear</i> , 2019 , 428-429, 55-63	3.5	15
40	The effects of adhesive strength and load on material transfer in nanoscale wear. <i>Computational Materials Science</i> , 2014 , 95, 464-469	3.2	15
39	Evaluation of Friction Behavior and Its Contact-Area Dependence at the Micro- and Nano-Scales. <i>Tribology Letters</i> , 2009 , 36, 259-267	2.8	15
38	Friction and wear behavior of ultrahigh molecular weight polyethylene as a function of crystallinity in the presence of the phospholipid dipalmitoyl phosphatidylcholine. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2010 , 93, 351-8	3.5	15
37	Superhydrophobic engineering surfaces with tunable air-trapping ability. <i>Journal of Micromechanics and Microengineering</i> , 2008 , 18, 035024	2	15
36	Effect of Retained Austenite on White Etching Crack Behavior of Carburized AISI 8620 Steel Under Boundary Lubrication. <i>Tribology Letters</i> , 2019 , 67, 1	2.8	10
35	The evolution of hardness and tribofilm growth during running-in of case carburized steel under boundary lubrication. <i>Tribology International</i> , 2018 , 118, 1-10	4.9	10

34	Structural and Chemical Evolution of the Near-Apex Region of an Atomic Force Microscope Tip Subject to Sliding. <i>Tribology Letters</i> , 2014 , 53, 181-187	2.8	10
33	Activation energy for diffusion and welding of PLA films. <i>Polymer Engineering and Science</i> , 2012 , 52, 1693-1700	3.7	10
32	Adhesion and friction studies of silicon surfaces processed using a microparticle-based method. <i>Tribology Letters</i> , 2006 , 23, 1-5	2.8	10
31	An alternative method to determining optical lever sensitivity in atomic force microscopy without tip-sample contact. <i>Review of Scientific Instruments</i> , 2010 , 81, 073711	1.7	9
30	Method to generate surfaces with desired roughness parameters. <i>Langmuir</i> , 2007 , 23, 8347-51	4	8
29	The Effect of Agglomeration Reduction on the Tribological Behavior of WS ₂ and MoS ₂ Nanoparticle Additives in the Boundary Lubrication Regime. <i>Lubricants</i> , 2018 , 6, 106	3.1	8
28	Microtribological behavior of Mo and W nanoparticle/graphene composites. <i>Wear</i> , 2018 , 414-415, 310-316	3.5	7
27	Effect of plasticizer on the wear behavior and ice adhesion of elastomeric coatings. <i>Wear</i> , 2019 , 426-427, 212-218	3.5	6
26	Automated trichome counting in soybean using advanced image-processing techniques. <i>Applications in Plant Sciences</i> , 2020 , 8, e11375	2.3	6
25	Influence of Deicing Salts on the Water-Repellency of Portland Cement Concrete Coated with Polytetrafluoroethylene and Polyetheretherketone 2017 ,		5
24	Lubricant Properties of α -Hydroxy Branched Fatty Acid-Containing Natural and Synthetic Lipids. <i>Tribology Letters</i> , 2017 , 65, 1	2.8	5
23	Rubbers Based on Conjugated Soybean Oil: Synthesis and Characterization. <i>Macromolecular Materials and Engineering</i> , 2011 , 296, 444-454	3.9	5
22	Micro- and macroscale coefficients of friction of cementitious materials. <i>Cement and Concrete Research</i> , 2013 , 54, 21-28	10.3	4
21	Formation of Size and Density Controlled Nanostructures by Galvanic Displacement. <i>Nanomaterials</i> , 2020 , 10,	5.4	3
20	The rheology of slurries of athermal cohesive micro-particles immersed in fluid: A computational and experimental comparison. <i>Chemical Engineering Science</i> , 2019 , 193, 411-420	4.4	3
19	Nanoscale Characterization of Cementitious Materials 2015 , 45-53		2
18	Atom scale characterization of the near apex region of an atomic force microscope tip. <i>Microscopy and Microanalysis</i> , 2010 , 16, 636-42	0.5	2
17	Tribological analysis of a novel lubricant additive: Pyrone esters. <i>Wear</i> , 2020 , 442-443, 203115	3.5	2

16	Failure mode mapping for rolling/sliding contacts under low lambda conditions. <i>Wear</i> , 2021 , 477, 203855,5	2
15	Rheological transition in simple shear of moderately dense assemblies of dry cohesive granules. <i>Physical Review E</i> , 2018 , 97, 062902	2.4 1
14	Iterative Control Approach to High-Speed Force-Distance Curve Measurement Using AFM for Biological Applications 2007 ,	1
13	A Comparison of Lateral Calibration Techniques for Quantitative Friction Force Microscopy 2005 , 821	1
12	Engineering Encounters: Teaching Educators About Engineering. <i>Science and Children</i> , 2017 , 055,	0.4 1
11	An investigation on ice adhesion and wear of surfaces with differential stiffness. <i>Wear</i> , 2021 , 476, 203663,5	1
10	Influence of Surfactants on the Tribological Behavior of Nanoparticle Additives Under Boundary Lubrication Conditions. <i>Arabian Journal for Science and Engineering</i> , 2021 , 46, 7967	2.5 0
9	Surface Stress Generation During Formation of Alkanethiol Self-assembled Monolayer (SAM). <i>Materials Research Society Symposia Proceedings</i> , 2006 , 951, 5	
8	Effect of Crystallinity on the Friction Behavior of Ultra-high-molecular-weight-polyethylene. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 977, 1	
7	Instrument Statics 2006 , 1-31	
6	A method to Generate Biomimetic Superhydrophobic Engineering Surfaces. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1008, 1	
5	The Effect of Protein Adsorption on the Friction Behavior of Ultra-High Molecular Weight Polyethylene 2006 , 1203	
4	Virtual Training Simulator for Atomic Force Microscopy 2005 , 567	
3	Evaluating Tribological Properties of Materials for Total Joint Replacements Using Scanning Probe Microscopy 2008 , 329-350	
2	Instrument Statics 1539	
1	Tribofilm characterization and residual stress changes in rolling/sliding contacts under low lambda conditions. <i>Wear</i> , 2022 , 204350	3.5