Michele Scaraggi

List of Publications by Year
in descending order

51 papers	1,586 citations	279798 23 h-index	302126 39 g-index
52 all docs	52 docs citations	52 times ranked	1392 citing authors

#	Article	IF	Citations
1	A Hybrid Multiscale Approach for Rubber Contact. Frontiers in Mechanical Engineering, 2022, 8, .	1.8	1
2	Scaling behaviour of braided active channels: a Taylorâ€™s power law approach. European Physical Journal Plus, 2022, 137, .	2.6	3
3	High Lubricity Meets Load Capacity: Cartilage Mimicking Bilayer Structure by Brushing Up Stiff Hydrogels from Subsurface. Advanced Functional Materials, 2020, 30, 2004062.	14.9	118
4	Lubricated sliding friction: Role of interfacial fluid slip and surface roughness. European Physical Journal E, 2020, 43, 9.	1.6	8
5	Bioinspired 3D Printed Locomotion Devices Based on Anisotropic Friction. Small, 2019, 15, e1802931.	10.0	21
6	Anisotropic Friction: Bioinspired 3D Printed Locomotion Devices Based on Anisotropic Friction (Small) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	10.0	3
7	Some Comments on Hydrogel and Cartilage Contact Mechanics and Friction. Tribology Letters, 2018, 66, 1.	2.6	13
8	Influence of anisotropic surface roughness on lubricated rubber friction: Extended theory and an application to hydraulic seals. Wear, 2018, 410-411, 43-62.	3.1	25
9	Contact mechanics between the human finger and a touchscreen under electroadhesion. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12668-12673.	7.1	64
10	Effect of fine-scale roughness on the tractions between contacting bodies. Tribology International, 2017, 111, 52-56.	5.9	31
11	Rough contact mechanics for viscoelastic graded materials: The role of small-scale wavelengths on rubber friction. International Journal of Solids and Structures, 2017, 125, 276-296.	2.7	13
12	Elastohydrodynamics for Soft Solids with Surface Roughness: Transient Effects. Tribology Letters, 2017, 65, 1.	2.6	4
13	Nanohydrogel Brushes for Switchable Underwater Adhesion. Journal of Physical Chemistry C, 2017, 121, 8452-8463.	3.1	22
14	Significant and stable drag reduction with air rings confined by alternated superhydrophobic and hydrophilic strips. Science Advances, 2017, 3, e1603288.	10.3	127
15	Non-Uniform Laser Surface Texturing of an Un-Tapered Square Pad for Tribological Applications. Lubricants, 2017, 5, 41.	2.9	12
16	Dependency of Rubber Friction on Normal Force or Load: Theory and Experiment. Tire Science and Technology, 2017, 45, 25-54.	0.4	21
17	Fundamentals of Adhesion. , 2016, , .		1
18	Influence of Anisotropic Surfaces on the Friction Behaviour of Hydraulic Seals. , 2016, , .		2

#	Article	IF	Citations
19	Nematic liquid crystals in a spatially step-wise magnetic field. Physical Review E, 2016, 93, 012701.	2.1	1
20	The influence of geometrical and rheological non-linearity on the calculation of rubber friction. Tribology International, 2016, 101, 402-413.	5.9	9
21	The effect of finite roughness size and bulk thickness on the prediction of rubber friction and contact mechanics. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2016, 230, 1398-1409.	2.1	8
22	General contact mechanics theory for randomly rough surfaces with application to rubber friction. Journal of Chemical Physics, 2015, 143, 224111.	3.0	28
23	The friction of sliding wet textured surfaces: the Bruggeman effective medium approach revisited. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140739.	2.1	5
24	Nanoporous Substrateâ€Infiltrated Hydrogels: a Bioinspired Regenerable Surface for High Load Bearing and Tunable Friction. Advanced Functional Materials, 2015, 25, 7366-7374.	14.9	87
25	Friction and universal contact area law for randomly rough viscoelastic contacts. Journal of Physics Condensed Matter, 2015, 27, 105102.	1.8	44
26	Partial surface texturing: A mechanism for local flow reconditioning in lubricated contacts. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2015, 229, 493-504.	1.8	10
27	Theory of adhesion: Role of surface roughness. Journal of Chemical Physics, 2014, 141, 124701.	3.0	162
28	Laser surface micro-texturing to enhance the frictional behavior of lubricated steel. Proceedings of SPIE, 2014, , .	0.8	4
29	Optimal Textures for Increasing the Load Support in a Thrust Bearing Pad Geometry. Tribology Letters, 2014, 53, 127-143.	2.6	23
30	Minimize friction of lubricated laser-microtextured-surfaces by tuning microholes depth. Tribology International, 2014, 75, 123-127.	5.9	71
31	Finite element modelling of bone tissue scaffolds. , 2014, , 485-511.		3
32	Rolling Friction: Comparison of Analytical Theory with Exact Numerical Results. Tribology Letters, 2014, 55, 15-21.	2.6	20
33	Theory of viscoelastic lubrication. Tribology International, 2014, 72, 118-130.	5.9	53
34	Elastic contact of rough surfaces: A simple criterion to make 2D isotropic roughness equivalent to 1D one. Wear, 2013, 297, 811-817.	3.1	32
35	Friction Properties of Lubricated Laser-MicroTextured-Surfaces: An Experimental Study from Boundary- to Hydrodynamic-Lubrication. Tribology Letters, 2013, 49, 117-125.	2.6	86
36	Varying the Geometry of Laser Surface Microtexturing to Enhance the Frictional Behavior of Lubricated Steel Surfaces. Physics Procedia, 2013, 41, 677-682.	1.2	9

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37	Contact electrification and the work of adhesion. Europhysics Letters, 2013, 103, 36003.	2.0	15
38	A Two-Scale Approach for Lubricated Soft-Contact Modeling: An Application to Lip-Seal Geometry. Advances in Tribology, 2012, 2012, 1-12.	2.1	11
39	Textured Surface Hydrodynamic Lubrication: Discussion. Tribology Letters, 2012, 48, 375-391.	2.6	33
40	Time-Dependent Fluid Squeeze-Out Between Soft Elastic Solids with Randomly Rough Surfaces. Tribology Letters, 2012, 47, 409-416.	2.6	24
41	Lubrication of textured surfaces: A general theory for flow and shear stress factors. Physical Review E, 2012, 86, 026314.	2.1	24
42	Lubrication in soft rough contacts: A novel homogenized approach. Part II - Discussion. Soft Matter, 2011, 7, 10407.	2.7	29
43	Lubrication in soft rough contacts: A novel homogenized approach. Part I - Theory. Soft Matter, 2011, 7, 10395.	2.7	61
44	Lubricated sliding dynamics: Flow factors and Stribeck curve. European Physical Journal E, 2011, 34, 113.	1.6	37
45	Experimental Evidence of Micro-EHL Lubrication in Rough Soft Contacts. Tribology Letters, 2011, 43, 169-174.	2.6	40
46	Transition from elastohydrodynamic to mixed lubrication in highly loaded squeeze contacts. Journal of the Mechanics and Physics of Solids, 2010, 58, 1361-1373.	4.8	7
47	Numerical and Experimental Investigation on O-Ring-Seals in Dynamic Applications. International Journal of Fluid Power, 2009, 10, 51-59.	0.7	11
48	On the transition from boundary lubrication to hydrodynamic lubrication in soft contacts. Journal of Physics Condensed Matter, 2009, 21, 185002.	1.8	53
49	EHL squeeze at pinâ€“pulley interface in CVTs: Influence of lubricant rheology. Tribology International, 2009, 42, 862-868.	5.9	11
50	Adhesive contact of rough surfaces: Comparison between numerical calculations and analytical theories. European Physical Journal E, 2009, 30, 65-74.	1.6	79
51	The Lubrication Regime at Pin-Pulley Interface in Chain CVTs. Journal of Mechanical Design, Transactions of the ASME, 2009, 131, .	2.9	6