

# Michele Scaraggi

## List of Publications by Year in descending order

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Version: 2024-02-01

51  
papers

1,586  
citations

279487

23  
h-index

301761

39  
g-index

52  
all docs

52  
docs citations

52  
times ranked

1392  
citing authors

#	ARTICLE	IF	CITATIONS
1	Theory of adhesion: Role of surface roughness. <i>Journal of Chemical Physics</i> , 2014, 141, 124701.	1.2	162
2	Significant and stable drag reduction with air rings confined by alternated superhydrophobic and hydrophilic strips. <i>Science Advances</i> , 2017, 3, e1603288.	4.7	127
3	High Lubricity Meets Load Capacity: Cartilage Mimicking Bilayer Structure by Brushing Up Stiff Hydrogels from Subsurface. <i>Advanced Functional Materials</i> , 2020, 30, 2004062.	7.8	118
4	Nanoporous Substrate-Infused Hydrogels: a Bioinspired Regenerable Surface for High Load Bearing and Tunable Friction. <i>Advanced Functional Materials</i> , 2015, 25, 7366-7374.	7.8	87
5	Friction Properties of Lubricated Laser-MicroTextured-Surfaces: An Experimental Study from Boundary- to Hydrodynamic-Lubrication. <i>Tribology Letters</i> , 2013, 49, 117-125.	1.2	86
6	Adhesive contact of rough surfaces: Comparison between numerical calculations and analytical theories. <i>European Physical Journal E</i> , 2009, 30, 65-74.	0.7	79
7	Minimize friction of lubricated laser-microtextured-surfaces by tuning microholes depth. <i>Tribology International</i> , 2014, 75, 123-127.	3.0	71
8	Contact mechanics between the human finger and a touchscreen under electroadhesion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 12668-12673.	3.3	64
9	Lubrication in soft rough contacts: A novel homogenized approach. Part I - Theory. <i>Soft Matter</i> , 2011, 7, 10395.	1.2	61
10	On the transition from boundary lubrication to hydrodynamic lubrication in soft contacts. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 185002.	0.7	53
11	Theory of viscoelastic lubrication. <i>Tribology International</i> , 2014, 72, 118-130.	3.0	53
12	Friction and universal contact area law for randomly rough viscoelastic contacts. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 105102.	0.7	44
13	Experimental Evidence of Micro-EHL Lubrication in Rough Soft Contacts. <i>Tribology Letters</i> , 2011, 43, 169-174.	1.2	40
14	Lubricated sliding dynamics: Flow factors and Stribeck curve. <i>European Physical Journal E</i> , 2011, 34, 113.	0.7	37
15	Textured Surface Hydrodynamic Lubrication: Discussion. <i>Tribology Letters</i> , 2012, 48, 375-391.	1.2	33
16	Elastic contact of rough surfaces: A simple criterion to make 2D isotropic roughness equivalent to 1D one. <i>Wear</i> , 2013, 297, 811-817.	1.5	32
17	Effect of fine-scale roughness on the tractions between contacting bodies. <i>Tribology International</i> , 2017, 111, 52-56.	3.0	31
18	Lubrication in soft rough contacts: A novel homogenized approach. Part II - Discussion. <i>Soft Matter</i> , 2011, 7, 10407.	1.2	29

#	ARTICLE	IF	CITATIONS
19	General contact mechanics theory for randomly rough surfaces with application to rubber friction. <i>Journal of Chemical Physics</i> , 2015, 143, 224111.	1.2	28
20	Influence of anisotropic surface roughness on lubricated rubber friction: Extended theory and an application to hydraulic seals. <i>Wear</i> , 2018, 410-411, 43-62.	1.5	25
21	Time-Dependent Fluid Squeeze-Out Between Soft Elastic Solids with Randomly Rough Surfaces. <i>Tribology Letters</i> , 2012, 47, 409-416.	1.2	24
22	Lubrication of textured surfaces: A general theory for flow and shear stress factors. <i>Physical Review E</i> , 2012, 86, 026314.	0.8	24
23	Optimal Textures for Increasing the Load Support in a Thrust Bearing Pad Geometry. <i>Tribology Letters</i> , 2014, 53, 127-143.	1.2	23
24	Nanohydrogel Brushes for Switchable Underwater Adhesion. <i>Journal of Physical Chemistry C</i> , 2017, 121, 8452-8463.	1.5	22
25	Bioinspired 3D Printed Locomotion Devices Based on Anisotropic Friction. <i>Small</i> , 2019, 15, e1802931.	5.2	21
26	Dependency of Rubber Friction on Normal Force or Load: Theory and Experiment. <i>Tire Science and Technology</i> , 2017, 45, 25-54.	0.3	21
27	Rolling Friction: Comparison of Analytical Theory with Exact Numerical Results. <i>Tribology Letters</i> , 2014, 55, 15-21.	1.2	20
28	Contact electrification and the work of adhesion. <i>Europhysics Letters</i> , 2013, 103, 36003.	0.7	15
29	Rough contact mechanics for viscoelastic graded materials: The role of small-scale wavelengths on rubber friction. <i>International Journal of Solids and Structures</i> , 2017, 125, 276-296.	1.3	13
30	Some Comments on Hydrogel and Cartilage Contact Mechanics and Friction. <i>Tribology Letters</i> , 2018, 66, 1.	1.2	13
31	Non-Uniform Laser Surface Texturing of an Un-Tapered Square Pad for Tribological Applications. <i>Lubricants</i> , 2017, 5, 41.	1.2	12
32	Numerical and Experimental Investigation on O-Ring-Seals in Dynamic Applications. <i>International Journal of Fluid Power</i> , 2009, 10, 51-59.	0.7	11
33	EHL squeeze at pin-pulley interface in CVTs: Influence of lubricant rheology. <i>Tribology International</i> , 2009, 42, 862-868.	3.0	11
34	A Two-Scale Approach for Lubricated Soft-Contact Modeling: An Application to Lip-Seal Geometry. <i>Advances in Tribology</i> , 2012, 2012, 1-12.	2.1	11
35	Partial surface texturing: A mechanism for local flow reconditioning in lubricated contacts. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2015, 229, 493-504.	1.0	10
36	Varying the Geometry of Laser Surface Microtexturing to Enhance the Frictional Behavior of Lubricated Steel Surfaces. <i>Physics Procedia</i> , 2013, 41, 677-682.	1.2	9

#	ARTICLE	IF	CITATIONS
37	The influence of geometrical and rheological non-linearity on the calculation of rubber friction. Tribology International, 2016, 101, 402-413.	3.0	9
38	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.	1.1	8
39	Lubricated sliding friction: Role of interfacial fluid slip and surface roughness. European Physical Journal E, 2020, 43, 9.	0.7	8
40	Transition from elasto-hydrodynamic to mixed lubrication in highly loaded squeeze contacts. Journal of the Mechanics and Physics of Solids, 2010, 58, 1361-1373.	2.3	7
41	The Lubrication Regime at Pin-Pulley Interface in Chain CVTs. Journal of Mechanical Design, Transactions of the ASME, 2009, 131, .	1.7	6
42	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.	1.0	5
43	Laser surface micro-texturing to enhance the frictional behavior of lubricated steel. Proceedings of SPIE, 2014, , .	0.8	4
44	Elastohydrodynamics for Soft Solids with Surface Roughness: Transient Effects. Tribology Letters, 2017, 65, 1.	1.2	4
45	Finite element modelling of bone tissue scaffolds. , 2014, , 485-511.		3
46	Anisotropic Friction: Bioinspired 3D Printed Locomotion Devices Based on Anisotropic Friction (Small) Tj ETQq0 0 0,rgBT /Overlock 10 Tf	5.2	3
47	Scaling behaviour of braided active channels: a Taylor's power law approach. European Physical Journal Plus, 2022, 137, .	1.2	3
48	Influence of Anisotropic Surfaces on the Friction Behaviour of Hydraulic Seals. , 2016, , .		2
49	Fundamentals of Adhesion. , 2016, , .		1
50	Nematic liquid crystals in a spatially step-wise magnetic field. Physical Review E, 2016, 93, 012701.	0.8	1
51	A Hybrid Multiscale Approach for Rubber Contact. Frontiers in Mechanical Engineering, 2022, 8, .	0.8	1