Roland Larsson

List of Publications by Year
in descending order

130 papers	3,152 citations	126708 33 h-index	197535 49 g-index
134 all docs	134 docs citations	134 times ranked	1685 citing authors

#	Article	IF	Citations
1	Controllable superlubricity achieved with mixtures of green ionic liquid and glycerol aqueous solution via humidity. Journal of Molecular Liquids, 2022, 345, 117860.	2.3	16
2	Micropitting performance of glycerol-based lubricants under rolling-sliding contact conditions. Tribology International, 2022, 167, 107348.	3.0	10
3	Micro-pitting and wear damage characterization of through hardened 100Cr6 and surface induction hardened C56E2 bearing steels. Wear, 2022, 492-493, 204218.	1.5	1
4	Validation of a Multi-Scale Contact Temperature Model for Dry Sliding Rough Surfaces. Lubricants, 2022, 10, 41.	1.2	3
5	Thermal Effects in Slender EHL Contacts. Lubricants, 2022, 10, 89.	1.2	6
6	A Closer Look at the Contact Conditions of a Block-on-Flat Wear Experiment. Lubricants, 2022, 10, 131.	1.2	2
7	The Critical Pressure for Bulk Leakage of Non-planar Smooth Surfaces. Tribology Letters, 2022, 70, .	1.2	2
8	Transient plasto-elastohydrodynamic lubrication concerning surface features with application to split roller bearings. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2021, 235, 453-467.	1.0	2
9	Application of topological optimisation methodology to hydrodynamic thrust bearings. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2021, 235, 1669-1679.	1.0	6
10	Tribological characterization of potential crankshaft bearing steels for roller bearing engines. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2021, 235, 1365-1378.	1.0	0
11	A New Film Parameter for Rough Surface EHL Contacts with Anisotropic and Isotropic Structures. Tribology Letters, 2021, 69, 1.	1.2	15
12	Artificial Neural Network Architecture for Prediction of Contact Mechanical Response. Frontiers in Mechanical Engineering, 2021, 6, .	0.8	8
13	A Multi-scale Contact Temperature Model for Dry Sliding Rough Surfaces. Tribology Letters, 2021, 69, 1.	1.2	9
14	Controlling friction in Ionic Liquid/Glycerol Aqueous Solution lubricated contacts by adjusting CO2 and water content. Tribology International, 2021, 161, 107070.	3.0	10
15	Numerical Simulation of Static Seal Contact Mechanics Including Hydrostatic Load at the Contacting Interface. Lubricants, 2021, 9, 1.	1.2	13
16	Boundary element method for the elastic contact problem with hydrostatic load at the contact interface. Applied Surface Science Advances, 2021, 6, 100176.	2.9	3
17	Bouncing ball lubrication. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2021, 235, 2582-2587.	1.0	0
18	Transient analysis of surface roughness features in thermal elastohydrodynamic contacts. Tribology International, 2020, 141, 105915.	3.0	14

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19	Topography transformations due to running-in of rolling-sliding non-conformal contacts. Tribology International, 2020, 144, 106126.	3.0	19
20	On Waviness and Two-Sided Surface Features in Thermal Elastohydrodynamically Lubricated Line Contacts. Lubricants, 2020, 8, 64.	1.2	5
21	Micro-pitting and wear characterization for different rolling bearing steels: Effect of hardness and heat treatments. Wear, 2020, 458-459, 203404.	1.5	13
22	Controllable Friction of Green Ionic Liquids via Environmental Humidity. Advanced Engineering Materials, 2020, 22, 1901253.	1.6	14
23	Lubricant film formation in rough surface non-conformal conjunctions subjected to GPa pressures and high slide-to-roll ratios. Scientific Reports, 2020, 10, 22250.	1.6	9
24	A smart friction control strategy enabled by CO2 absorption and desorption. Scientific Reports, 2019, 9, 13262.	1.6	6
25	Micro-Pitting and Wear Assessment of PAO vs Mineral-Based Engine Oil Operating under Mixed Lubrication Conditions: Effects of Lambda, Roughness Lay and Sliding Direction. Lubricants, 2019, 7, 42.	1.2	11
26	Micro-pitting Damage of Bearing Steel Surfaces under Mixed Lubrication Conditions: Effects of Roughness, Hardness and ZDDP Additive. Tribology International, 2019, 138, 239-249.	3.0	31
27	Micro-pitting and wear assessment of engine oils operating under boundary lubrication conditions. Tribology International, 2019, 129, 338-346.	3.0	25
28	Influence of Lubricant Pressure Response on Subsurface Stress in Elastohydrodynamically Lubricated Finite Line Contacts. Journal of Tribology, 2019, 141, .	1.0	3
29	Poly(alkylimidazolium bis(trifluoromethylsulfonyl)imide)â€Based Polymerized Ionic Liquids: A Potential Highâ€Performance Lubricating Grease. Advanced Materials Interfaces, 2019, 6, 1801796.	1.9	5
30	Mapping of the lubrication regimes in rough surface EHL contacts. Tribology International, 2019, 131, 637-651.	3.0	30
31	A Computational Fluid Dynamics Study on Shearing Mechanisms in Thermal Elastohydrodynamic Line Contacts. Lubricants, 2019, 7, 69.	1.2	9
32	CuO nanosheets produced in graphene oxide solution: An excellent anti-wear additive for self-lubricating polymer composites. Composites Science and Technology, 2018, 162, 86-92.	3.8	37
33	Synthesis of hollow fullerene-like molybdenum disulfide/reduced graphene oxide nanocomposites with excellent lubricating properties. Carbon, 2018, 134, 423-430.	5.4	29
34	Turning the solubility and lubricity of ionic liquids by absorbing CO 2. Tribology International, 2018, 121, 223-230.	3.0	22
35	Performance and mechanisms of silicate tribofilm in heavily loaded rolling/sliding non-conformal contacts. Tribology International, 2018, 123, 130-141.	3.0	13
36	Time-dependent hysteresis friction behaviors of linear rolling bearings. International Journal of Advanced Manufacturing Technology, 2018, 94, 3109-3116.	1.5	1

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37	On the flow through plastically deformed surfaces under unloading: A spectral approach. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 908-918.	1.1	5
38	Modelling and analysis of elastic and thermal deformations of a hybrid journal bearing. Tribology International, 2018, 118, 451-457.	3.0	34
39	Texture-induced effects causing reduction of friction in mixed lubrication for twin land oil control rings. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2018, 232, 166-178.	1.0	8
40	Thermal Turbulent Flow in Leading Edge Grooved and Conventional Tilting Pad Journal Bearing Segmentsâ€"A Comparative Study. Lubricants, 2018, 6, 97.	1.2	9
41	On the loading and unloading of metal-to-metal seals: A two-scale stochastic approach. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2018, 232, 1525-1537.	1.0	12
42	Material Characterization and Influence of Sliding Speed and Pressure on Friction and Wear Behavior of Self-Lubricating Bearing Materials for Hydropower Applications. Lubricants, 2018, 6, 39.	1.2	18
43	Elastohydrodynamic lubrication for the finite line contact under transient loading conditions. Tribology International, 2018, 127, 489-499.	3.0	19
44	The detection of plastic deformation in rolling element bearings by acoustic emission. Tribology International, 2017, 110, 209-215.	3.0	12
45	Fuel consumption and friction benefits of low viscosity engine oils for heavy duty applications. Tribology International, 2017, 110, 23-34.	3.0	37
46	Application of an inclined, spinning ball-on-rotating disc apparatus to simulate railway wheel and rail contact problems. Wear, 2017, 374-375, 46-53.	1.5	5
47	Influence on friction from piston ring design, cylinder liner roughness and lubricant properties. Tribology International, 2017, 116, 272-284.	3.0	48
48	A low degree of freedom approach for prediction of friction in finite EHL line contacts. Tribology International, 2017, 115, 628-639.	3.0	6
49	Linear Complementarity Framework for 3D Steady-State Rolling Contact Problems Including Creepages with Isotropic and Anisotropic Friction for Circular Hertzian Contact. Tribology Transactions, 2017, 60, 832-844.	1.1	8
50	The effect of ageing on elastohydrodynamic friction in heavy-duty diesel engine oils. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2017, 231, 708-715.	1.0	5
51	The influence of contact time and event frequency on acoustic emission signals. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2017, 231, 1341-1349.	1.0	3
52	A Complementarity Problemâ€"Based Solution Procedure for 2D Steady-State Rolling Contacts with Dry Friction. Tribology Transactions, 2016, 59, 1031-1038.	1.1	8
53	Fully coupled EHL model for simulation of finite length line cam-roller follower contacts. Tribology International, 2016, 103, 584-598.	3.0	41
54	Traction formula for rolling-sliding contacts in consideration of roughness under low slide to roll ratios. Tribology International, 2016, 104, 263-271.	3.0	9

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55	Non-corrosive and Biomaterials Protic Ionic Liquids with High Lubricating Performance. Tribology Letters, 2016, 63, 1.	1.2	71
56	Component test for simulation of piston ring â€“ Cylinder liner friction at realistic speeds. Tribology International, 2016, 104, 57-63.	3.0	32
57	A stochastic two-scale model for pressure-driven flow between rough surfaces. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160069.	1.0	22
58	Modelling of leakage on metal-to-metal seals. Tribology International, 2016, 94, 421-427.	3.0	68
59	A model for twin land oil control rings. Tribology International, 2016, 95, 475-482.	3.0	9
60	Prediction of driveline vibrations caused by ageing the limited slip coupling. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2016, 230, 1687-1698.	1.1	5
61	Low degree of freedom approach for predicting friction in elastohydrodynamically lubricated contacts. Tribology International, 2016, 94, 560-570.	3.0	12
62	Surface chemistry of wet clutch influenced by water contamination in automatic transmission fluids. Tribology International, 2016, 96, 395-401.	3.0	8
63	Degradation mechanism of automatic transmission fluid by water as a contaminant. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2015, 229, 74-85.	1.0	9
64	A two scale mixed lubrication wearing-in model, applied to hydraulic motors. Tribology International, 2015, 90, 248-256.	3.0	19
65	Influence of water on the tribological properties of zinc dialkyl-dithiophosphate and over-based calcium sulphonate additives in wet clutch contacts. Tribology International, 2015, 87, 113-120.	3.0	10
66	Comment on â€œHistory, Origins and Prediction of Elastohydrodynamic Frictionâ€•by Spikes and Jie. Tribology Letters, 2015, 58, 1.	1.2	42
67	A wear model for EHL contacts in gerotor type hydraulic motors. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2015, 229, 254-264.	1.1	9
68	The correlation between gear contact friction and ball on disc friction measurements. Tribology International, 2015, 83, 114-119.	3.0	23
69	Study of the short-term effect of Fe₃O₄ particles in rolling element bearings: Observation of vibration, friction and change of surface topography of contaminated angular contact ball bearings. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 1063-1070.	1.0	9
70	The effect of three-dimensional deformations of a cylinder liner on the tribological performance of a piston ringâ€“cylinder liner system. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 1080-1087.	1.0	7
71	Boundary and elastohydrodynamic lubrication studies of glycerol aqueous solutions as green lubricants. Tribology International, 2014, 69, 39-45.	3.0	83
72	Evaluating lifetime performance of limited slip differentials. Lubrication Science, 2014, 26, 189-201.	0.9	2

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73	A New Approach for Studying Cavitation in Lubrication. Journal of Tribology, 2014, 136, .	1.0	40
74	The Effect of DLC Coating Thickness on Elstohydrodynamic Friction. Tribology Letters, 2014, 55, 353-362.	1.2	33
75	Friction Reduction in Elastohydrodynamic Contacts by Thin-Layer Thermal Insulation. Tribology Letters, 2014, 53, 477-486.	1.2	75
76	An experimental and numerical investigation of frictional losses and film thickness for four cylinder liner variants for a heavy duty diesel engine. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2013, 227, 1319-1333.	1.0	23
77	Towards the true prediction of EHL friction. Tribology International, 2013, 66, 19-26.	3.0	68
78	The influence of AFM and VSI techniques on the accurate calculation of tribological surface roughness parameters. Tribology International, 2013, 57, 242-250.	3.0	20
79	Influence of Clutch Output Shaft Inertia and Stiffness on the Performance of the Wet Clutch. Tribology Transactions, 2013, 56, 310-319.	1.1	22
80	Experimental and numerical investigations of oil film formation and friction in a piston ringâ€“liner contact. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2013, 227, 126-140.	1.0	19
81	Water contamination effect in wet clutch system. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2013, 227, 376-389.	1.1	10
82	Semi-deterministic chemo-mechanical model of boundary lubrication. Faraday Discussions, 2012, 156, 343.	1.6	30
83	The Influence of DLC Coating on EHL Friction Coefficient. Tribology Letters, 2012, 47, 285-294.	1.2	44
84	Film thickness in a ball-on-disc contact lubricated with greases, bleed oils and base oils. Tribology International, 2012, 53, 53-60.	3.0	56
85	Numerical simulation of a wear experiment. Wear, 2011, 271, 2947-2952.	1.5	70
86	SPECIAL ISSUE ON NORDTRIB: THE NORDIC SYMPOSIUM ON TRIBOLOGY 2010. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2011, 225, 563-564.	1.0	0
87	SPECIAL ISSUE ON TRIBOLOGY RESEARCH IN SCANDINAVIA. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2011, 225, 973-974.	1.0	0
88	A numerical model to investigate the effect of honing angle on the hydrodynamic lubrication between a combustion engine piston ring and cylinder liner. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2011, 225, 683-689.	1.0	36
89	The influence of surface roughness on friction in a flexible hybrid bearing. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2011, 225, 975-985.	1.0	7
90	A semi-deterministic texture-roughness model of the piston ringâ€“cylinder liner contact. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2011, 225, 325-333.	1.0	35

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91	Elastohydrodynamic lubrication friction mapping â€“ the influence of lubricant, roughness, speed, and slide-to-roll ratio. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2011, 225, 671-681.	1.0	40
92	The influence of base oil polarity on the tribological performance of zinc dialkyl dithiophospate additives. Tribology International, 2010, 43, 2268-2278.	3.0	60
93	Evolution of ZDDPâ€derived reaction layer morphology with rubbing time. Scanning, 2010, 32, 294-303.	0.7	14
94	Wet Clutch Degradation Monitored by Lubricant Analysis. , 2010, , .		2
95	A mixed lubrication model incorporating measured surface topography. Part 1: Theory of flow factors. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2010, 224, 335-351.	1.0	106
96	Lubricant ageing effects on the friction characteristics of wet clutches. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2010, 224, 639-647.	1.0	17
97	A mixed lubrication model incorporating measured surface topography. Part 2: Roughness treatment, model validation, and simulation. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2010, 224, 353-365.	1.0	48
98	Modelling the effect of surface roughness on lubrication in all regimes. Tribology International, 2009, 42, 512-516.	3.0	43
99	Elasto-hydrodynamic simulation of complex geometries in hydraulic motors. Tribology International, 2009, 42, 1418-1423.	3.0	11
100	On the influence of surface roughness on real area of contact in normal, dry, friction free, rough contact by using a neural network. Wear, 2009, 266, 592-595.	1.5	35
101	The Influence on Boundary Friction of the Permeability of Sintered Bronze. Tribology Letters, 2008, 31, 1-8.	1.2	9
102	Thermal transient rough EHL line contact simulations by aid of computational fluid dynamics. Tribology International, 2008, 41, 683-693.	3.0	24
103	Film-forming capability in rough surface EHL investigated using contact resistance. Tribology International, 2008, 41, 831-838.	3.0	30
104	Wet clutch friction characteristics obtained from simplified pin on disc test. Tribology International, 2008, 41, 824-830.	3.0	64
105	Permeability of Sinter Bronze Friction Material for Wet Clutches. Tribology Transactions, 2008, 51, 303-309.	1.1	5
106	On the dry elasto-plastic contact of nominally flat surfaces. Tribology International, 2007, 40, 574-579.	3.0	69
107	Thermal influence on torque transfer of wet clutches in limited slip differential applications. Tribology International, 2007, 40, 876-884.	3.0	88
108	Rough surface flow factors in full film lubrication based on a homogenization technique. Tribology International, 2007, 40, 1025-1034.	3.0	35

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109	A cavitation algorithm for arbitrary lubricant compressibility. Tribology International, 2007, 40, 1294-1300.	3.0	55
110	A Cavitation Algorithm for Arbitrary Lubricant Compressibility. , 2005, , 541.		1
111	Two-Dimensional CFD-Analysis of Micro-Patterned Surfaces in Hydrodynamic Lubrication. Journal of Tribology, 2005, 127, 96-102.	1.0	166
112	A comparison between computational fluid dynamic and Reynolds approaches for simulating transient EHL line contacts. Tribology International, 2004, 37, 61-69.	3.0	42
113	Performance of synthetic oils in the hydrodynamic regime â€" 1. experimental. Journal of Synthetic Lubrication: Research, Development and Application of Synthetic Lubricants and Functional Fluids, 2003, 20, 15-24.	0.7	13
114	Performance of synthetic oils in the hydrodynamic regime - II. Generalisation. Journal of Synthetic Lubrication: Research, Development and Application of Synthetic Lubricants and Functional Fluids, 2003, 20, 139-149.	0.7	0
115	The effect of two-sided roughness in rolling/sliding ehl line contacts. Tribology Series, 2003, 43, 243-251.	0.1	1
116	Die wall friction and influence of some process parameters on friction in iron powder compaction. Materials Science and Technology, 2003, 19, 1777-1782.	0.8	12
117	The Significance of Oil Thermal Properties on the Performance of a Tilting-Pad Thrust Bearing. Journal of Tribology, 2002, 124, 377-385.	1.0	62
118	The Navierâ€"Stokes approach for thermal EHL line contact solutions. Tribology International, 2002, 35, 163-170.	3.0	52
119	Base fluid parameters for elastohydrodynamic lubrication and friction calculations and their influence on lubrication capability. Journal of Synthetic Lubrication: Research, Development and Application of Synthetic Lubricants and Functional Fluids, 2001, 18, 183-198.	0.7	25
120	Determination of lubricant compressibility in EHL conjunctions using the Hybrid technique. Tribology Series, 2000, 38, 589-596.	0.1	5
121	Oil film thickness measurement by means of an optic lever technique. Lubrication Science, 2000, 13, 23-35.	0.9	2
122	Film Thickness, Pressure Distribution and Traction in Sliding EHL Conjunctions. Tribology Series, 1999, 36, 505-516.	0.1	7
123	Observations in Transiently Loaded EHL Contacts under Pure Sliding Conditions. Tribology Transactions, 1998, 41, 489-496.	1.1	2
124	Modelling Non-Steady EHL with Focus on Lubricant Density. Tribology Series, 1997, , 511-521.	0.1	8
125	Transient non-Newtonian elastohydrodynamic lubrication analysis of an involute spur gear. Wear, 1997, 207, 67-73.	1.5	111
126	Study of lubricated impact using optical interferometry. Wear, 1995, 190, 184-189.	1.5	36

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127	Numerical Simulation of a Ball Impacting and Rebounding a Lubricated Surface. Journal of Tribology, 1995, 117, 94-102.	1.0	69
128	Elastohydrodynamic Lubrication at Impact Loading. Journal of Tribology, 1994, 116, 770-776.	1.0	31
129	A simplified solution to the combined squeeze-sliding lubrication problem. Wear, 1994, 173, 85-94.	1.5	8
130	Elastohydrodynamic lubrication at pure squeeze motion. Wear, 1994, 179, 39-43.	1.5	23