

# Tom Lenaerts

## List of Publications by Year in descending order

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Version: 2024-02-01

112  
papers

3,993  
citations

186265

28  
h-index

133252

59  
g-index

121  
all docs

121  
docs citations

121  
times ranked

3781  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolutionary dynamics of social dilemmas in structured heterogeneous populations. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3490-3494.	7.1	834
2	Cooperation Prevails When Individuals Adjust Their Social Ties. PLoS Computational Biology, 2006, 2, e140.	3.2	440
3	The role of diversity in the evolution of cooperation. Journal of Theoretical Biology, 2012, 299, 88-96.	1.7	158
4	Cross-biome comparison of microbial association networks. Frontiers in Microbiology, 2015, 6, 1200.	3.5	154
5	Reacting Differently to Adverse Ties Promotes Cooperation in Social Networks. Physical Review Letters, 2009, 102, 058105.	7.8	146
6	From protein sequence to dynamics and disorder with DynaMine. Nature Communications, 2013, 4, 2741.	12.8	139
7	The DynaMine webserver: predicting protein dynamics from sequence. Nucleic Acids Research, 2014, 42, W264-W270.	14.5	125
8	DEOGEN2: prediction and interactive visualization of single amino acid variant deleteriousness in human proteins. Nucleic Acids Research, 2017, 45, W201-W206.	14.5	114
9	DOME: recommendations for supervised machine learning validation in biology. Nature Methods, 2021, 18, 1122-1127.	19.0	105
10	DIDA: A curated and annotated digenic diseases database. Nucleic Acids Research, 2016, 44, D900-D907.	14.5	84
11	Emergence of Fairness in Repeated Group Interactions. Physical Review Letters, 2012, 108, 158104.	7.8	83
12	Protein-Peptide Interactions Adopt the Same Structural Motifs as Monomeric Protein Folds. Structure, 2009, 17, 1128-1136.	3.3	79
13	Dynamics of Mutant Cells in Hierarchical Organized Tissues. PLoS Computational Biology, 2011, 7, e1002290.	3.2	70
14	Predicting disease-causing variant combinations. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11878-11887.	7.1	68
15	Tyrosine kinase inhibitor therapy can cure chronic myeloid leukemia without hitting leukemic stem cells. Haematologica, 2010, 95, 900-907.	3.5	55
16	Good Agreements Make Good Friends. Scientific Reports, 2013, 3, 2695.	3.3	53
17	A selection-mutation model for q-learning in multi-agent systems. , 2003, , .		52
18	Avoiding or restricting defectors in public goods games?. Journal of the Royal Society Interface, 2015, 12, 20141203.	3.4	51

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19	The evolutionary language game: An orthogonal approach. <i>Journal of Theoretical Biology</i> , 2005, 235, 566-582.	1.7	50
20	Evolution of commitment and level of participation in public goods games. <i>Autonomous Agents and Multi-Agent Systems</i> , 2017, 31, 561-583.	2.1	50
21	ORVAL: a novel platform for the prediction and exploration of disease-causing oligogenic variant combinations. <i>Nucleic Acids Research</i> , 2019, 47, W93-W98.	14.5	46
22	Understanding mutational effects in digenic diseases. <i>Nucleic Acids Research</i> , 2017, 45, e140-e140.	14.5	45
23	The evolution of prompt reaction to adverse ties. <i>BMC Evolutionary Biology</i> , 2008, 8, 287.	3.2	44
24	Apology and forgiveness evolve to resolve failures in cooperative agreements. <i>Scientific Reports</i> , 2015, 5, 10639.	3.3	43
25	Reconstruction of Protein Backbones from the BriX Collection of Canonical Protein Fragments. <i>PLoS Computational Biology</i> , 2008, 4, e1000083.	3.2	42
26	Quantifying information transfer by protein domains: Analysis of the Fyn SH2 domain structure. <i>BMC Structural Biology</i> , 2008, 8, 43.	2.3	33
27	Synergy between intention recognition and commitments in cooperation dilemmas. <i>Scientific Reports</i> , 2015, 5, 9312.	3.3	33
28	Multilevel biological characterization of exomic variants at the protein level significantly improves the identification of their deleterious effects. <i>Bioinformatics</i> , 2016, 32, 1797-1804.	4.1	32
29	On the dynamics of neutral mutations in a mathematical model for a homogeneous stem cell population. <i>Journal of the Royal Society Interface</i> , 2013, 10, 20120810.	3.4	31
30	Selection pressure transforms the nature of social dilemmas in adaptive networks. <i>New Journal of Physics</i> , 2011, 13, 013007.	2.9	30
31	A synergy of costly punishment and commitment in cooperation dilemmas. <i>Adaptive Behavior</i> , 2016, 24, 237-248.	1.9	29
32	Generosity motivated by acceptance—evolutionary analysis of an anticipation game. <i>Scientific Reports</i> , 2016, 5, 18076.	3.3	29
33	Novel promoters and coding first exons in <i>DLC2</i> linked to developmental disorders and intellectual disability. <i>Genome Medicine</i> , 2017, 9, 67.	8.2	29
34	Timing Uncertainty in Collective Risk Dilemmas Encourages Group Reciprocation and Polarization. <i>IScience</i> , 2020, 23, 101752.	4.1	28
35	Accurate Prediction of the Dynamical Changes within the Second PDZ Domain of PTP1e. <i>PLoS Computational Biology</i> , 2012, 8, e1002794.	3.2	25
36	Dynamic contact networks of patients and MRSA spread in hospitals. <i>Scientific Reports</i> , 2020, 10, 9336.	3.3	20

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37	Raising the Dead: Extending Evolutionary Algorithms with a Case-Based Memory. Lecture Notes in Computer Science, 2001, , 280-290.	1.3	20
38	When agreement-accepting free-riders are a necessary evil for the evolution of cooperation. Scientific Reports, 2017, 7, 2478.	3.3	19
39	Digenic inheritance of human primary microcephaly delineates centrosomal and non-centrosomal pathways. Human Mutation, 2020, 41, 512-524.	2.5	19
40	Mediating artificial intelligence developments through negative and positive incentives. PLoS ONE, 2021, 16, e0244592.	2.5	18
41	To Regulate or Not: A Social Dynamics Analysis of an Idealised AI Race. Journal of Artificial Intelligence Research, 0, 69, 881-921.	7.0	18
42	Information theoretical quantification of cooperativity in signalling complexes. BMC Systems Biology, 2009, 3, 9.	3.0	17
43	Evolutionary Dynamics of Chronic Myeloid Leukemia. Genes and Cancer, 2010, 1, 309-315.	1.9	17
44	Socio-cognitively inspired ant colony optimization. Journal of Computational Science, 2017, 21, 397-406.	2.9	17
45	Stochastic Simulation of the Chemoton. Artificial Life, 2009, 15, 213-226.	1.3	16
46	Growing biological networks: Beyond the gene-duplication model. Journal of Theoretical Biology, 2006, 241, 488-505.	1.7	15
47	Coevolution of Cooperation, Response to Adverse Social Ties and Network Structure. Games, 2010, 1, 317-337.	0.6	15
48	Evolutionary dynamics of paroxysmal nocturnal hemoglobinuria. PLoS Computational Biology, 2018, 14, e1006133.	3.2	14
49	Do people imitate when making decisions? Evidence from a spatial Prisoner's Dilemma experiment. Royal Society Open Science, 2020, 7, 200618.	2.4	14
50	Voluntary safety commitments provide an escape from over-regulation in AI development. Technology in Society, 2022, 68, 101843.	9.4	14
51	Evolution of Complexity. Artificial Life, 2008, 14, 241-243.	1.3	13
52	A Synthon Approach to Artificial Chemistry. Artificial Life, 2009, 15, 89-103.	1.3	11
53	Dynamical Hierarchies (Guest Editors' Introduction). Artificial Life, 2005, 11, 403-405.	1.3	10
54	Emergence of cooperation via intention recognition, commitment and apology – research summary. AI Communications, 2015, 28, 709-715.	1.2	10

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55	Multi-pheromone ant Colony Optimization for Socio-cognitive Simulation Purposes. <i>Procedia Computer Science</i> , 2015, 51, 954-963.	2.0	10
56	Using game theory and decision decomposition to effectively discern and characterise bi-locus diseases. <i>Artificial Intelligence in Medicine</i> , 2019, 99, 101690.	6.5	10
57	Scaling up oligogenic diseases research with OLIDA: the Oligogenic Diseases Database. <i>Database: the Journal of Biological Databases and Curation</i> , 2022, 2022, .	3.0	10
58	Enhancing Particle Swarm Optimization with Socio-cognitive Inspirations. <i>Procedia Computer Science</i> , 2016, 80, 804-813.	2.0	9
59	Modelling and Influencing the AI Bidding War. , 2019, , .		9
60	NR5A1 c.991â€¦ splice site variant causes familial 46,XY partial gonadal dysgenesis with incomplete penetrance. <i>Clinical Endocrinology</i> , 2021, 94, 656-666.	2.4	9
61	Learning to Reach the Pareto Optimal Nash Equilibrium as a Team. <i>Lecture Notes in Computer Science</i> , 2002, , 407-418.	1.3	9
62	Artificial intelligence development races in heterogeneous settings. <i>Scientific Reports</i> , 2022, 12, 1723.	3.3	9
63	Transition models as an incremental approach for problem solving in evolutionary algorithms. , 2005, , .		8
64	Dynamically Coupled Residues within the SH2 Domain of FYN Are Key to Unlocking Its Activity. <i>Structure</i> , 2016, 24, 1947-1959.	3.3	8
65	SVM-dependent pairwise HMM: an application to protein pairwise alignments. <i>Bioinformatics</i> , 2017, 33, 3902-3908.	4.1	8
66	Evolutionary Transitions as a Metaphor for Evolutionary Optimisation. <i>Lecture Notes in Computer Science</i> , 2005, , 342-352.	1.3	8
67	Explaining the in vitro and in vivo differences in leukemia therapy. <i>Cell Cycle</i> , 2011, 10, 1540-1544.	2.6	7
68	Structural insights into the intertwined dimer of fyn SH2. <i>Protein Science</i> , 2015, 24, 1964-1978.	7.6	7
69	Large-scale in-silico statistical mutagenesis analysis sheds light on the deleteriousness landscape of the human proteome. <i>Scientific Reports</i> , 2018, 8, 16980.	3.3	7
70	Delegation to artificial agents fosters prosocial behaviors in the collective risk dilemma. <i>Scientific Reports</i> , 2022, 12, 8492.	3.3	7
71	Building a genetic programming framework: The added-value of design patterns. <i>Lecture Notes in Computer Science</i> , 1998, , 196-208.	1.3	6
72	An Evolutionary Game Theoretic Perspective on Learning in Multi-Agent Systems. <i>Synthese</i> , 2004, 139, 297-330.	1.1	6

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73	Evolution of DNA Uptake Signal Sequences. <i>Artificial Life</i> , 2005, 11, 317-338.	1.3	6
74	Predicting virus mutations through statistical relational learning. <i>BMC Bioinformatics</i> , 2014, 15, 309.	2.6	6
75	Flexible asynchronous simulation of iterated prisoner's dilemma based on actor model. <i>Simulation Modelling Practice and Theory</i> , 2018, 83, 75-92.	3.8	6
76	Lineage and Induction in the Development of Evolved Genotypes for Non-uniform 2D CAs. <i>Lecture Notes in Computer Science</i> , 2002, , 321-332.	1.3	6
77	Multistage feedback-driven compartmental dynamics of hematopoiesis. <i>IScience</i> , 2021, 24, 102326.	4.1	5
78	From Binding-Induced Dynamic Effects in SH3 Structures to Evolutionary Conserved Sectors. <i>PLoS Computational Biology</i> , 2016, 12, e1004938.	3.2	5
79	Inferring strategies from observations in long iterated Prisoner's dilemma experiments. <i>Scientific Reports</i> , 2022, 12, 7589.	3.3	5
80	Protein Domains as Information Processing Units. <i>Current Protein and Peptide Science</i> , 2009, 10, 133-145.	1.4	4
81	Measuring Diversity of Socio-Cognitively Inspired ACO Search. <i>Lecture Notes in Computer Science</i> , 2016, , 393-408.	1.3	3
82	Modeling behavioral experiments on uncertainty and cooperation with population-based reinforcement learning. <i>Simulation Modelling Practice and Theory</i> , 2021, 109, 102299.	3.8	3
83	The robustness of small developed SBlock circuits using different clocking schemes. , 0, , .		2
84	Purification, crystallization and preliminary X-ray diffraction analysis of the Fyn SH2 domain and its complex with a phosphotyrosine peptide. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012, 68, 359-364.	0.7	2
85	Infiltrative tumour growth pattern correlates with poor outcome in oesophageal cancer. <i>BMJ Open Gastroenterology</i> , 2020, 7, e000431.	2.7	2
86	Repeated Interaction and Its Impact on Cooperation and Surplus Allocation—An Experimental Analysis. <i>Games</i> , 2021, 12, 25.	0.6	2
87	Politics Matters: Dynamics of Inter-organizational Networks among Immigrant Associations. <i>Studies in Computational Intelligence</i> , 2014, , 47-55.	0.9	2
88	Evolution of Cooperation in a Population of Selfish Adaptive Agents. <i>Lecture Notes in Computer Science</i> , 2007, , 535-544.	1.3	2
89	How Expert Confidence Can Improve Collective Decision-Making in Contextual Multi-Armed Bandit Problems. <i>Lecture Notes in Computer Science</i> , 2020, , 125-138.	1.3	2
90	Gene interaction and modularisation in a model for gene-regulated development. , 0, , .		2

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91	1H, 13C and 15N backbone and side-chain chemical shift assignment of the Fyn SH2 domain and its complex with a phosphotyrosine peptide. <i>Biomolecular NMR Assignments</i> , 2011, 5, 181-184.	0.8	1
92	1H, 13C, and 15N backbone and side-chain chemical shift assignments of the free and bound forms of the human PTPN11 second SH2 domain. <i>Biomolecular NMR Assignments</i> , 2013, 8, 297-301.	0.8	1
93	Evolution of Fairness and Conditional Cooperation in Public Goods Dilemmas. <i>Springer Proceedings in Complexity</i> , 2013, , 827-830.	0.3	1
94	Adaptation of Population Structure in Socio-cognitive Particle Swarm Optimization. <i>Procedia Computer Science</i> , 2016, 101, 177-186.	2.0	1
95	About the discrete-continuous nature of a hematopoiesis model for Chronic Myeloid Leukemia. <i>Mathematical Biosciences</i> , 2016, 282, 174-180.	1.9	1
96	Structural Characterization of Monomeric/Dimeric State of p59fyn SH2 Domain. <i>Methods in Molecular Biology</i> , 2017, 1555, 257-267.	0.9	1
97	Emergence of Cooperation in Adaptive Social Networks with Behavioral Diversity. <i>Lecture Notes in Computer Science</i> , 2011, , 434-441.	1.3	1
98	EMERGENCE OF POPULATION STRUCTURE IN SOCIO-COGNITIVELY INSPIRED ANT COLONY OPTIMIZATION. <i>Computer Science</i> , 2018, 19, 83.	0.6	1
99	Is Scale-Free A Realistic Topology For Evolving Biochemical Networks?. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0
100	The coevolution of loyalty and cooperation. , 2009, , .		0
101	Equivalence of cooperation indexes. <i>Physics of Life Reviews</i> , 2016, 16, 196-197.	2.8	0
102	Chemical shift assignments of the partially deuterated Fyn SH2â€“SH3 domain. <i>Biomolecular NMR Assignments</i> , 2018, 12, 117-122.	0.8	0
103	Transitions in a Simple Evolutionary Model. <i>Lecture Notes in Computer Science</i> , 2001, , 436-439.	1.3	0
104	Growing Biochemical Networks: Identifying the Intrinsic Properties. <i>Lecture Notes in Computer Science</i> , 2005, , 864-873.	1.3	0
105	Networks Regulating Networks: The Effects of Constraints on Topological Evolution. <i>Lecture Notes in Computer Science</i> , 2007, , 956-965.	1.3	0
106	Solving Hierarchically Decomposable Problems with the Evolutionary Transition Algorithm. <i>Studies in Computational Intelligence</i> , 2009, , 111-143.	0.9	0
107	The Evolutionary Transition Algorithm: Evolving Complex Solutions Out of Simpler Ones. <i>Studies in Computational Intelligence</i> , 2009, , 103-131.	0.9	0
108	Evolution of Cooperation in Adaptive Social Networks. <i>World Scientific Lecture Notes in Complex Systems</i> , 2009, , 373-392.	0.1	0

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109	Scale Free Networks. , 2011, , 1492-1493.		0
110	Towards Large-Scale Optimization of Iterated Prisoner Dilemma Strategies. Lecture Notes in Computer Science, 2019, , 167-183.	1.3	0
111	Towards a Phylogenetic Measure to Quantify HIV Incidence. Communications in Computer and Information Science, 2020, , 34-50.	0.5	0
112	Collective Decision-Making as a Contextual Multi-armed Bandit Problem. Lecture Notes in Computer Science, 2020, , 113-124.	1.3	0