

# Luc De Raedt

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5679120/publications.pdf>

Version: 2024-02-01

204  
papers

6,272  
citations

126708

33  
h-index

91712

69  
g-index

225  
all docs

225  
docs citations

225  
times ranked

3070  
citing authors

#	ARTICLE	IF	CITATIONS
1	Parameter Learning in ProbLog with Annotated Disjunctions. Lecture Notes in Computer Science, 2022, , 378-391.	1.0	1
2	Automating data science. Communications of the ACM, 2022, 65, 76-87.	3.3	11
3	OMEN: network-based driver gene identification using mutual exclusivity. Bioinformatics, 2022, 38, 3245-3251.	1.8	4
4	Muppets: Multipurpose Table Segmentation. Lecture Notes in Computer Science, 2021, , 389-401.	1.0	0
5	Learning CNF Theories Using MDL and Predicate Invention. , 2021, , .		0
6	Neural probabilistic logic programming in DeepProbLog. Artificial Intelligence, 2021, 298, 103504.	3.9	30
7	VisualSynth: Democratizing Data Science in Spreadsheets. Lecture Notes in Computer Science, 2021, , 550-554.	1.0	0
8	Chapter 7. Neuro-Symbolic AI = Neural + Logical + Probabilistic AI. Frontiers in Artificial Intelligence and Applications, 2021, , .	0.3	0
9	Semantic Relational Object Tracking. IEEE Transactions on Cognitive and Developmental Systems, 2020, 12, 84-97.	2.6	18
10	Predictive spreadsheet autocompletion with constraints. Machine Learning, 2020, 109, 307-325.	3.4	6
11	COVID-19 in people with multiple sclerosis: A global data sharing initiative. Multiple Sclerosis Journal, 2020, 26, 1157-1162.	1.4	50
12	Semiring programming: A semantic framework for generalized sum product problems. International Journal of Approximate Reasoning, 2020, 126, 181-201.	1.9	6
13	Symbolic Learning and Reasoning With Noisy Data for Probabilistic Anchoring. Frontiers in Robotics and AI, 2020, 7, 100.	2.0	6
14	Learning MAX-SAT from Contextual Examples for Combinatorial Optimisation. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 4493-4500.	3.6	3
15	From Statistical Relational to Neuro-Symbolic Artificial Intelligence. , 2020, , .		42
16	SynthLog: A Language for Synthesising Inductive Data Models (Extended Abstract). Communications in Computer and Information Science, 2020, , 102-110.	0.4	1
17	ProbAnch: a Modular Probabilistic Anchoring Framework. , 2020, , .		1
18	Representing dynamic biological networks with multi-scale probabilistic models. Communications Biology, 2019, 2, 21.	2.0	23

#	ARTICLE	IF	CITATIONS
19	Automating Personnel Rostering by Learning Constraints Using Tensors. , 2019, , .		4
20	Semantic and geometric reasoning for robotic grasping: a probabilistic logic approach. Autonomous Robots, 2019, 43, 1393-1418.	3.2	20
21	Exact and Approximate Weighted Model Integration with Probability Density Functions Using Knowledge Compilation. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 7825-7833.	3.6	5
22	Acquiring Integer Programs from Data. , 2019, , .		3
23	The pywmi Framework and Toolbox for Probabilistic Inference using Weighted Model Integration. , 2019, , .		1
24	Relational affordances for multiple-object manipulation. Autonomous Robots, 2018, 42, 19-44.	3.2	14
25	Sketched Answer Set Programming. , 2018, , .		0
26	Relational Affordance Learning for Task-Dependent Robot Grasping. Lecture Notes in Computer Science, 2018, , 1-15.	1.0	0
27	Elements of an Automatic Data Scientist. Lecture Notes in Computer Science, 2018, , 3-14.	1.0	4
28	Automatically Wrangling Spreadsheets into Machine Learning Data Formats. Lecture Notes in Computer Science, 2018, , 367-379.	1.0	5
29	MiningZinc: A declarative framework for constraint-based mining. Artificial Intelligence, 2017, 244, 6-29.	3.9	22
30	Algebraic model counting. Journal of Applied Logic, 2017, 22, 46-62.	1.1	16
31	Context-based object viewpoint estimation: A 2D relational approach. Computer Vision and Image Understanding, 2017, 160, 100-113.	3.0	0
32	Learning constraints in spreadsheets and tabular data. Machine Learning, 2017, 106, 1441-1468.	3.4	26
33	Flexible constrained sampling with guarantees for pattern mining. Data Mining and Knowledge Discovery, 2017, 31, 1266-1293.	2.4	16
34	Semiring Rank Matrix Factorization. IEEE Transactions on Knowledge and Data Engineering, 2017, 29, 1737-1750.	4.0	2
35	kProbLog: an algebraic Prolog for machine learning. Machine Learning, 2017, 106, 1933-1969.	3.4	4
36	Planning in hybrid relational MDPs. Machine Learning, 2017, 106, 1905-1932.	3.4	4



#	ARTICLE	IF	CITATIONS
55	Inductive Logic Programming. , 2016, , 1-8.		1
56	Modeling in MiningZinc. Lecture Notes in Computer Science, 2016, , 257-281.	1.0	0
57	Learning Constraint Satisfaction Problems: An ILP Perspective. Lecture Notes in Computer Science, 2016, , 96-112.	1.0	6
58	Introduction to the special issue on probability, logic and learning. Theory and Practice of Logic Programming, 2015, 15, 145-146.	1.1	0
59	PheNetic: network-based interpretation of molecular profiling data. Nucleic Acids Research, 2015, 43, W244-W250.	6.5	24
60	Probabilistic (logic) programming concepts. Machine Learning, 2015, 100, 5-47.	3.4	120
61	Inference and learning in probabilistic logic programs using weighted Boolean formulas. Theory and Practice of Logic Programming, 2015, 15, 358-401.	1.1	125
62	ProbLog2: Probabilistic Logic Programming. Lecture Notes in Computer Science, 2015, , 312-315.	1.0	24
63	Rank Matrix Factorisation. Lecture Notes in Computer Science, 2015, , 734-746.	1.0	2
64	Planning in Discrete and Continuous Markov Decision Processes by Probabilistic Programming. Lecture Notes in Computer Science, 2015, , 327-342.	1.0	8
65	Introduction to the Special Issue on the ECAI 2012 Turing and Anniversary Track. AI Communications, 2014, 27, 1-1.	0.8	0
66	Interactive Learning of Pattern Rankings. International Journal on Artificial Intelligence Tools, 2014, 23, 1460026.	0.7	19
67	Learning relational affordance models for two-arm robots. , 2014, , .		7
68	Occluded object search by relational affordances. , 2014, , .		20
69	There are plenty of places like home: Using relational representations in hierarchies for distance-based image understanding. Neurocomputing, 2014, 123, 75-85.	3.5	5
70	Relational object tracking and learning. , 2014, , .		13
71	Towards cautious collective inference for object verification. , 2014, , .		2
72	kLog: A language for logical and relational learning with kernels. Artificial Intelligence, 2014, 217, 117-143.	3.9	20

#	ARTICLE	IF	CITATIONS
73	Relational Regularization and Feature Ranking. , 2014, , .		2
74	Statistical Relational Learning of Object Affordances for Robotic Manipulation. , 2014, , 95-103.		1
75	Lazy and Eager Relational Learning Using Graph-Kernels. Lecture Notes in Computer Science, 2014, , 171-184.	1.0	1
76	Distributional Clauses Particle Filter. Lecture Notes in Computer Science, 2014, , 504-507.	1.0	1
77	kLogNLP: Graph Kernelâ€‘based Relational Learning of Natural Language. , 2014, , .		1
78	Mining closed patterns in relational, graph and network data. Annals of Mathematics and Artificial Intelligence, 2013, 69, 315-342.	0.9	8
79	Allocentric Pose Estimation. , 2013, , .		6
80	k-Pattern Set Mining under Constraints. IEEE Transactions on Knowledge and Data Engineering, 2013, 25, 402-418.	4.0	56
81	PheNetic: network-based interpretation of unstructured gene lists in E. coli. Molecular BioSystems, 2013, 9, 1594.	2.9	35
82	Active Preference Learning for Ranking Patterns. , 2013, , .		6
83	A relational kernel-based approach to scene classification. , 2013, , .		4
84	A particle filter for hybrid relational domains. , 2013, , .		22
85	The MiningZinc Framework for Constraint-Based Itemset Mining. , 2013, , .		4
86	MCMC Estimation of Conditional Probabilities in Probabilistic Programming Languages. Lecture Notes in Computer Science, 2013, , 436-448.	1.0	4
87	10 Years of Probabilistic Querying â€‘ What Next?. Lecture Notes in Computer Science, 2013, , 1-13.	1.0	2
88	Learning relational affordance models for robots in multi-object manipulation tasks. , 2012, , .		66
89	Mining Local Staircase Patterns in Noisy Data. , 2012, , .		0
90	ILP turns 20. Machine Learning, 2012, 86, 3-23.	3.4	91

#	ARTICLE	IF	CITATIONS
91	Declarative Modeling for Machine Learning and Data Mining. Lecture Notes in Computer Science, 2012, , 2-2.	1.0	2
92	Relational Learning for Spatial Relation Extraction from Natural Language. Lecture Notes in Computer Science, 2012, , 204-220.	1.0	13
93	Declarative Modeling for Machine Learning and Data Mining. Lecture Notes in Computer Science, 2012, , 12-12.	1.0	6
94	A Relational Kernel-Based Framework for Hierarchical Image Understanding. Lecture Notes in Computer Science, 2012, , 171-180.	1.0	9
95	Declarative Modeling for Machine Learning and Data Mining. Lecture Notes in Computer Science, 2012, , 1-1.	1.0	0
96	Patterns and Logic for Reasoning with Networks. Lecture Notes in Computer Science, 2012, , 122-143.	1.0	1
97	Kernel-Based Logical and Relational Learning with kLog for Hedge Cue Detection. Lecture Notes in Computer Science, 2012, , 347-357.	1.0	10
98	On the implementation of the probabilistic logic programming language ProbLog. Theory and Practice of Logic Programming, 2011, 11, 235-262.	1.1	90
99	The magic of logical inference in probabilistic programming. Theory and Practice of Logic Programming, 2011, 11, 663-680.	1.1	39
100	Effective feature construction by maximum common subgraph sampling. Machine Learning, 2011, 83, 137-161.	3.4	21
101	Guest editorial to the special issue on inductive logic programming, mining and learning in graphs and statistical relational learning. Machine Learning, 2011, 83, 133-135.	3.4	1
102	Stochastic relational processes: Efficient inference and applications. Machine Learning, 2011, 82, 239-272.	3.4	25
103	Itemset mining: A constraint programming perspective. Artificial Intelligence, 2011, 175, 1951-1983.	3.9	131
104	Declarative Heuristic Search for Pattern Set Mining. , 2011, , .		5
105	Logic of Generality. , 2011, , 624-631.		2
106	Evaluating Pattern Set Mining Strategies in a Constraint Programming Framework. Lecture Notes in Computer Science, 2011, , 382-394.	1.0	8
107	Extending ProbLog with Continuous Distributions. Lecture Notes in Computer Science, 2011, , 76-91.	1.0	14
108	Learning the Parameters of Probabilistic Logic Programs from Interpretations. Lecture Notes in Computer Science, 2011, , 581-596.	1.0	36

#	ARTICLE	IF	CITATIONS
109	Not Far Away from Home: A Relational Distance-Based Approach to Understanding Images of Houses. Lecture Notes in Computer Science, 2011, , 22-29.	1.0	0
110	Fast learning of relational kernels. Machine Learning, 2010, 78, 305-342.	3.4	25
111	Mining Predictive k-CNF Expressions. IEEE Transactions on Knowledge and Data Engineering, 2010, 22, 743-748.	4.0	8
112	Probabilistic Inductive Querying Using ProbLog. , 2010, , 229-262.		4
113	A Theory of Inductive Query Answering. , 2010, , 79-103.		21
114	Towards Clausal Discovery for Stream Mining. Lecture Notes in Computer Science, 2010, , 9-16.	1.0	3
115	About Knowledge and Inference in Logical and Relational Learning. Studies in Computational Intelligence, 2010, , 143-153.	0.7	4
116	A query language for analyzing networks. , 2009, , .		24
117	Correlated itemset mining in ROC space. , 2009, , .		48
118	Cluster-grouping: from subgroup discovery to clustering. Machine Learning, 2009, 77, 125-159.	3.4	26
119	Deriving distance metrics from generality relations. Pattern Recognition Letters, 2009, 30, 187-191.	2.6	13
120	Compressing probabilistic Prolog programs. Machine Learning, 2008, 70, 151-168.	3.4	23
121	An experimental evaluation of simplicity in rule learning. Artificial Intelligence, 2008, 172, 19-28.	3.9	19
122	Constraint programming for itemset mining. , 2008, , .		80
123	Logical and Relational Learning. Cognitive Technologies, 2008, , .	0.5	212
124	Probabilistic Inductive Logic Programming. Lecture Notes in Computer Science, 2008, , 1-27.	1.0	83
125	Basic Principles of Learning Bayesian Logic Programs. Lecture Notes in Computer Science, 2008, , 189-221.	1.0	25
126	A Simple Model for Sequences of Relational State Descriptions. Lecture Notes in Computer Science, 2008, , 506-521.	1.0	10

#	ARTICLE	IF	CITATIONS
127	Active Learning for High Throughput Screening. Lecture Notes in Computer Science, 2008, , 185-196.	1.0	15
128	On the Efficient Execution of ProbLog Programs. Lecture Notes in Computer Science, 2008, , 175-189.	1.0	30
129	Logic, Probability and Learning, or an Introduction to Statistical Relational Learning. Lecture Notes in Computer Science, 2008, , 5-5.	1.0	0
130	Relational Sequence Learning. Lecture Notes in Computer Science, 2008, , 28-55.	1.0	11
131	Predicting Spike Activity in Neuronal Cultures. , 2007, , .		0
132	Learning to transfer optimal navigation policies. Advanced Robotics, 2007, 21, 1565-1582.	1.1	5
133	Constraint-Based Pattern Set Mining. , 2007, , .		64
134	Predicting spike activity in neuronal cultures. BMC Neuroscience, 2007, 8, .	0.8	0
135	Ranking neurons for mining structure-activity relations in biological neural networks: NeuronRank. Neurocomputing, 2007, 70, 1897-1901.	3.5	4
136	Frequent Hypergraph Mining. Lecture Notes in Computer Science, 2007, , 244-259.	1.0	16
137	Probabilistic Explanation Based Learning. Lecture Notes in Computer Science, 2007, , 176-187.	1.0	18
138	IQL: A Proposal for an Inductive Query Language. Lecture Notes in Computer Science, 2007, , 189-207.	1.0	9
139	Mining Bi-sets in Numerical Data. Lecture Notes in Computer Science, 2007, , 11-23.	1.0	7
140	Mining Structure-Activity Relations in Biological Neural Networks using NeuronRank. Studies in Computational Intelligence, 2007, , 49-65.	0.7	0
141	Revising Probabilistic Prolog Programs. Lecture Notes in Computer Science, 2007, , 30-33.	1.0	1
142	SMIREP: Predicting Chemical Activity from SMILES. Journal of Chemical Information and Modeling, 2006, 46, 2432-2444.	2.5	37
143	Learning Relational Navigation Policies. , 2006, , .		13
144	Don't Be Afraid of Simpler Patterns. Lecture Notes in Computer Science, 2006, , 55-66.	1.0	31

#	ARTICLE	IF	CITATIONS
145	Inductive Querying for Discovering Subgroups and Clusters. Lecture Notes in Computer Science, 2006, , 380-399.	1.0	1
146	An Efficient Algorithm for Mining String Databases Under Constraints. Lecture Notes in Computer Science, 2005, , 108-129.	1.0	19
147	Statistical Relational Learning: An Inductive Logic Programming Perspective. Lecture Notes in Computer Science, 2005, , 3-5.	1.0	3
148	CLASSIC <sup>TM</sup> CL: An Integrated ILP System. Lecture Notes in Computer Science, 2005, , 354-362.	1.0	3
149	Bellman goes relational. , 2004, , .		56
150	Probabilistic Inductive Logic Programming. Lecture Notes in Computer Science, 2004, , 19-36.	1.0	42
151	Data Mining and Machine Learning Techniques for the Identification of Mutagenicity Inducing Substructures and Structure-Activity Relationships of Noncongeneric Compounds.. ChemInform, 2004, 35, no.	0.1	3
152	Data Mining and Machine Learning Techniques for the Identification of Mutagenicity Inducing Substructures and Structure Activity Relationships of Noncongeneric Compounds. Journal of Chemical Information and Computer Sciences, 2004, 44, 1402-1411.	2.8	186
153	Predictive Graph Mining. Lecture Notes in Computer Science, 2004, , 1-15.	1.0	8
154	CorClass: Correlated Association Rule Mining for Classification. Lecture Notes in Computer Science, 2004, , 60-72.	1.0	35
155	Towards Optimizing Conjunctive Inductive Queries. Lecture Notes in Computer Science, 2004, , 625-637.	1.0	2
156	Towards Query Evaluation in Inductive Databases Using Version Spaces. Lecture Notes in Computer Science, 2004, , 117-134.	1.0	1
157	Logical Markov Decision Programs and the Convergence of Logical TD( $\hat{\mu}$ ). Lecture Notes in Computer Science, 2004, , 180-197.	1.0	16
158	Multirelational data mining 2003. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2003, 5, 200-202.	3.2	7
159	Probabilistic logic learning. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2003, 5, 31-48.	3.2	88
160	Multi-relational data mining. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2003, 5, 100-101.	3.2	9
161	A perspective on inductive databases. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2002, 4, 69-77.	3.2	93
162	Multi-relational data mining. SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining, 2002, 4, 122-124.	3.2	7

#	ARTICLE	IF	CITATIONS
163	Phase Transitions and Stochastic Local Search in $k$ -Term DNF Learning. Lecture Notes in Computer Science, 2002, , 405-417.	1.0	5
164	Data Mining as Constraint Logic Programming. Lecture Notes in Computer Science, 2002, , 526-547.	1.0	9
165	Molecular feature mining in HIV data. , 2001, , .		151
166	Relational Reinforcement Learning. Machine Learning, 2001, 43, 7-52.	3.4	205
167	Towards Combining Inductive Logic Programming with Bayesian Networks. Lecture Notes in Computer Science, 2001, , 118-131.	1.0	66
168	How to Upgrade Propositional Learners to First Order Logic: A Case Study. Lecture Notes in Computer Science, 2001, , 102-126.	1.0	4
169	How to Upgrade Propositional Learners to First Order Logic: A Case Study. , 2001, , 235-261.		17
170	Three Companions for Data Mining in First Order Logic. , 2001, , 105-139.		17
171	A Logical Database Mining Query Language. Lecture Notes in Computer Science, 2000, , 78-92.	1.0	17
172	Scaling Up Inductive Logic Programming by Learning from Interpretations. Data Mining and Knowledge Discovery, 1999, 3, 59-93.	2.4	67
173	Inductive Verification and Validation of the KULRoT RoboCup Team. Lecture Notes in Computer Science, 1999, , 193-206.	1.0	2
174	Generalizing Refinement Operators to Learn Prenex Conjunctive Normal Forms. Lecture Notes in Computer Science, 1999, , 245-256.	1.0	9
175	Top-down induction of first-order logical decision trees. Artificial Intelligence, 1998, 101, 285-297.	3.9	519
176	Attribute-value learning versus inductive logic programming: The missing links. Lecture Notes in Computer Science, 1998, , 1-8.	1.0	64
177	Isidd: An interactive system for inductive database design. Applied Artificial Intelligence, 1998, 12, 385-420.	2.0	4
178	Relational reinforcement learning. Lecture Notes in Computer Science, 1998, , 11-22.	1.0	51
179	Using ILP-systems for verification and validation of multi-agent systems. Lecture Notes in Computer Science, 1998, , 145-154.	1.0	5
180	Clausal Discovery. Machine Learning, 1997, 26, 99-146.	3.4	143

#	ARTICLE	IF	CITATIONS
181	Logical settings for concept-learning. Artificial Intelligence, 1997, 95, 187-201.	3.9	118
182	Relational knowledge discovery in databases. Lecture Notes in Computer Science, 1997, , 199-211.	1.0	16
183	Multiple Predicate Learning in Two Inductive Logic Programming Settings. Logic Journal of the IGPL, 1996, 4, 227-254.	1.3	8
184	Inductive Logic Programming: A Survey of European Research. AI Communications, 1995, 8, 3-19.	0.8	4
185	Declarative Bias for Specific-to-General ILP Systems. Machine Learning, 1995, 20, 119-154.	3.4	2
186	Declarative bias for specific-to-general ILP systems. Machine Learning, 1995, 20, 119-154.	3.4	35
187	Iterative versionspaces. Artificial Intelligence, 1994, 69, 393-409.	3.9	15
188	First-order jk-clausal theories are PAC-learnable. Artificial Intelligence, 1994, 70, 375-392.	3.9	123
189	Inductive Logic Programming: Theory and methods. The Journal of Logic Programming, 1994, 19-20, 629-679.	1.9	952
190	A unifying framework for concept-learning algorithms. Knowledge Engineering Review, 1992, 7, 251-269.	2.1	10
191	Acquiring object-knowledge. Journal of Experimental and Theoretical Artificial Intelligence, 1992, 4, 213-232.	1.8	2
192	Interactive concept-learning and constructive induction by analogy. Machine Learning, 1992, 8, 107-150.	3.4	27
193	Interactive Concept-Learning and Constructive Induction by Analogy. Machine Learning, 1992, 8, 107-150.	3.4	40
194	Belief updating from integrity constraints and queries. Artificial Intelligence, 1992, 53, 291-307.	3.9	25
195	Acquiring object-knowledge for learning systems. Lecture Notes in Computer Science, 1991, , 245-264.	1.0	4
196	Integrity Constraints and Interactive Concept-Learning. , 1991, , 394-398.		2
197	Indirect relevance and bias in inductive concept-learning. International Journal of Human-Computer Studies, 1990, 2, 365-390.	1.2	14
198	Generalizing multiple examples in explanation based learning. Lecture Notes in Computer Science, 1989, , 177-183.	1.0	1

#	ARTICLE	IF	CITATIONS
199	A theory of inductive query answering. , 0, , .		28
200	An algebra for inductive query evaluation. , 0, , .		15
201	Learning Distributional Programs for Relational Autocompletion. Theory and Practice of Logic Programming, 0, , 1-34.	1.1	0
202	Logical Hidden Markov Models. Journal of Artificial Intelligence Research, 0, 25, 425-456.	7.0	48
203	Relational Symbol Grounding through Affordance Learning: An Overview of the ReGround Project. , 0, , .		1
204	Lifted model checking for relational MDPs. Machine Learning, 0, , .	3.4	0