

Supplementary 2

Top-cited paper by publication year with citation counts

Years	Highly cited top paper	Author full names	Citations	
			Scopus	Google Scholar
1985	<i>The category concept: An extension to the entity-relationship model</i> 10.1016/0169-023X(85)90027-8	Elmasri, R.; Weeldreyer, J.; Hevner, A.	167	444
1986	-	-	-	-
1987	<i>ADDS: A system for automatic database schema design based on the binary-relationship model</i> 10.1016/0169-023X(87)90018-8	Shoval, Peretz; Even-Chaime, Moshe	25	49
1988	<i>Timetabling through a deductive database: A case study</i> 10.1016/0169-023X(88)90002-X	Monfroglio, Angelo	21	38
1989	<i>Specifying dynamic and deontic integrity constraints</i> 10.1016/0169-023X(89)90038-4	Wieringa, Roel; Meyer, John-Jules; Weigand, Hans	58	138
1990	<i>A formal approach to object-oriented databases</i> 10.1016/0169-023X(90)90020-E	Beerli, Catriel	117	350
1991	<i>Relational database design based on the entity-relationship model</i> 10.1016/0169-023X(91)90033-T	Storey, Veda C.	36	79
1992	<i>Concepts, attributes and arbitrary relations. Some linguistic and ontological criteria for structuring knowledge bases</i> 10.1016/0169-023X(92)90025-7	Guarino, Nicola	152	354
1993	<i>Cardinality constraints in semantic data models</i> 10.1016/0169-023X(93)90024-J	Liddle, Stephen W.; Embley, David W.; Woodfield, Scott N.	67	109
1994	<i>Snoop: An expressive event specification language for active databases</i> 10.1016/0169-023X(94)90006-X	Chakravarthy, S.; Mishra, D.	279	805
1995	<i>Different roles and mutual dependencies of data, information, and knowledge - An AI perspective on their integration</i> 10.1016/0169-023X(95)00017-M	Aamodt, Agnar; Nygård, Mads	130	493
1996	<i>Mereotopology: A theory of parts and boundaries</i> 10.1016/S0169-023X(96)00015-8	Smith, Barry	225	505
1997	<i>Entity-relationship and object-oriented data modeling - An experimental comparison of design quality</i> 10.1016/S0169-023X(97)88935-5	Shoval, Peretz; Shiran, Sagit	66	147
1998	<i>Knowledge Engineering: Principles and methods</i> 10.1016/S0169-023X(97)00056-6	Studer, Rudi; Benjamins, V. Richard; Fensel, Dieter	2747	6442
1999	<i>Conceptual-model-based data extraction from multiple-record Web pages</i> 10.1016/S0169-023X(99)00027-0	Embley, D.W.; Campbell, D.M.; Jiang, Y.S.; Liddle, S.W.; Lonsdale, D.W.; Ng, Y.-K.; Smith, R.D.	224	551
2000	<i>On the representation of roles in object-oriented and conceptual modelling</i> 10.1016/S0169-023X(00)00023-9	Steimann, Friedrich	321	641
2001	<i>Supporting ontological analysis of taxonomic relationships</i> 10.1016/S0169-023X(01)00030-1	Welty, Christopher; Guarino, Nicola	255	601
2002	<i>Computing iceberg concept lattices with TITANIC</i> 10.1016/S0169-023X(02)00057-5	Stumme, Gerd; Taouil, Rafik; Bastide, Yves; Pasquier, Nicolas; Lakhal, Lotfi	363	629
2003	<i>Workflow mining: A survey of issues and approaches</i> 10.1016/S0169-023X(03)00066-1	Van der Aalst, Wil M.P.; Van Dongen, Boudewijn F.; Herbst, Joachim; Maruster, Laura; Schimm, Guido; Weijters, A.J.M.M.	884	1622
2004	<i>Correctness criteria for dynamic changes in workflow systems - A survey</i> 10.1016/j.datak.2004.01.002	Rinderle, Stefanie; Reichert, Manfred; Dadam, Peter	317	610

2005	<i>Case handling: A new paradigm for business process support</i> 10.1016/j.datak.2004.07.003	Van Der Aalst, Wil M.P.; Weske, Mathias; Grünbauer, Dolf	598	1061
2006	<i>How do practitioners use conceptual modeling in practice?</i> 10.1016/j.datak.2005.07.007	Davies, Islay; Green, Peter; Rosemann, Michael; Indulska, Marta; Gallo, Stan	345	591
2007	<i>ST-DBSCAN: An algorithm for clustering spatial-temporal data</i> 10.1016/j.datak.2006.01.013	Birant, Derya; Kut, Alp	1069	1781
2008	A conceptual view on trajectories 10.1016/j.datak.2007.10.008	Spaccapietra, Stefano; Parent, Christine; Damiani, Maria Luisa; de Macedo, Jose Antonio; Porto, Fabio; Vangenot, Christelle	495	909
2009	The refined process structure tree 10.1016/j.datak.2009.02.015	Vanhatalo, Jussi; Völzer, Hagen; Koehler, Jana	200	318
2010	Frameworks for entity matching: A comparison 10.1016/j.datak.2009.10.003	Köpcke, Hanna; Rahm, Erhard	305	566
2011	Analysis on demand: Instantaneous soundness checking of industrial business process models 10.1016/j.datak.2011.01.004	Fahland, Dirk; Favre, Cédric; Koehler, Jana; Lohmann, Niels; Völzer, Hagen; Wolf, Karsten	129	184
2012	From humor recognition to irony detection: The figurative language of social media 10.1016/j.datak.2012.02.005	Reyes, Antonio; Rosso, Paolo; Buscaldi, Davide	277	525
2013	On detection of emerging anomalous traffic patterns using GPS data 10.1016/j.datak.2013.05.002	Pang, Linsey Xiaolin; Chawla, Sanjay; Liu, Wei; Zheng, Yu	127	181
2014	WB-index: A sum-of-squares based index for cluster validity 10.1016/j.datak.2014.07.008	Zhao, Qinpei; Fränti, Pasi	109	169
2015	A system for mining interesting tourist locations and travel sequences from public geo-tagged photos 10.1016/j.datak.2014.11.001	Majid, Abdul; Chen, Ling; Mirza, Hamid Turab; Hussain, Ibrar; Chen, Gencai	66	92
2016	An analysis of ontologies and their success factors for application to business 10.1016/j.datak.2015.11.003	Feilmayr, Christina; Wöß, Wolfram	88	92
2017	Big data technologies and Management: What conceptual modeling can do 10.1016/j.datak.2017.01.001	Storey, Veda C.; Song, Il- Yeol	210	360
2018	Learning multiple layers of knowledge representation for aspect based sentiment analysis 10.1016/j.datak.2017.06.001	Pham, Duc-Hong; Le, Anh- Cuong	98	142
2019	Stance polarity in political debates: A diachronic perspective of network homophily and conversations on Twitter 10.1016/j.datak.2019.101738	Lai, Mirko; Tambuscio, Marcella; Patti, Viviana; Ruffo, Giancarlo; Rosso, Paolo	44	78
2020	Integrating Cuckoo search-Grey wolf optimization and Correlative Naive Bayes classifier with Map Reduce model for big data classification 10.1016/j.datak.2019.101788	Banchhor, Chitrakant; Srinivasu, N.	40	49
2021	Deep learning in the COVID-19 epidemic: A deep model for urban traffic revitalization index 10.1016/j.datak.2021.101912	Lv, Zhiqiang; Li, Jianbo; Dong, Chuanhao; Li, Haoran; Xu, Zhihao	56	79
2022	The impact of psycholinguistic patterns in discriminating between fake news spreaders and fact checkers 10.1016/j.datak.2021.101960	Giachanou, Anastasia; Ghanem, Bilal; Ríssola, Esteban A.; Rosso, Paolo; Crestani, Fabio; Oberski, Daniel	27	44
2023	Ontology-based semantic retrieval of documents using Word2vec model 10.1016/j.datak.2022.102110	Sharma, Anil; Kumar, Suresh	17	24
2024 (Vol 149- 153, June 2024)	Issues in inter-organizational data sharing: Findings from practice and research challenges 10.1016/j.datak.2024.102280	Jussen, Ilka; Möller, Frederik; Schweihoff, Julia; Gieß, Anna; Giussani, Giulia; Otto, Boris	4	11

Source: Scopus (1985-2024)
Google Scholar (23.07.2024)

Table of Figure 4

List of affiliations featured in the DKE journal over the past 40 years

Affiliations	Frequencies
Vrije Universiteit Amsterdam	39
Consiglio Nazionale delle Ricerche	36
Nanyang Technological University	34
Aristotle University of Thessaloniki	32
Universitat Politècnica de Catalunya	29
National University of Singapore	29
Università della Calabria	29
Technische Universiteit Eindhoven	28
School of Computer Science and Engineering	28
CNRS Centre National de la Recherche Scientifique	27
The University of Queensland	24
Seoul National University	23
Conservatoire National des Arts et Metiers	23
Alma Mater Studiorum Università di Bologna	23
Universiteit Twente	21
Universitat d'Alacant	18
Technische Universität Wien	18
Missouri University of Science and Technology	18
College of Engineering and Computing	18
Universitat Politècnica de València	17
Ben-Gurion University of the Negev	17
Università degli Studi di Milano	17
Georgia State University	16
Korea Advanced Institute of Science and Technology	16
Free University of Bozen-Bolzano	15
Karlsruher Institut für Technologie, Campus Süd	15
University of Patras	15
Queensland University of Technology	14
Drexel University	14
Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau	14
Arizona State University	13
The University of Arizona	13
Tilburg University	13
Otto-von-Guericke-Universität Magdeburg	13
University of Maryland, College Park	13
KU Leuven	13
The University of Manchester	12
Brigham Young University	12
Hong Kong University of Science and Technology	12
University of Toronto	12
IBM Thomas J. Watson Research Center	12
Ulster University	12
Johannes Kepler University Linz	12

University College London	12
University of Melbourne	12
Universidade Federal do Espírito Santo	12
J. Mack Robinson College of Business	12
Ministry of Education of the People's Republic of China	11
University of Houston	11
National Chiao Tung University	11
Norges Teknisk-Naturvitenskapelige Universitet	11
Radboud Universiteit	11
Universidade Federal de Minas Gerais	11
Université de Toulouse	11
The Australian National University	10
Tampere University	10
University of Florida	10
Università di Trento	10
Yonsei University	10
Universität Klagenfurt	10
Computer Technology Institute and Press	10
New Jersey Institute of Technology	10
Stockholms universitet	10
Commonwealth Scientific and Industrial Research Organisation	10
Institut de Recherche en Informatique de Toulouse	10
University of Alberta	10
Université Paris-Saclay	10
Laboratoire d'Informatique en Image et Systèmes d'Information	10
Ira A. Fulton Schools of Engineering	10
Humboldt-Universität zu Berlin	9
National Technical University of Athens NTUA	9
The University of Texas at Arlington	9
Universidade de São Paulo	9
Purdue University	9
King's College London	9
Rheinisch-Westfälische Technische Hochschule Aachen	9
Wright State University	9
Università degli Studi di Reggio Calabria	9
Politecnico di Milano	9
Università degli Studi di Genova	9
Universidad Politécnica de Madrid	9
University of South Australia	9
NEC Corporation of America	9
Pennsylvania State University	8
Chinese University of Hong Kong	8
Università degli Studi di Modena e Reggio Emilia	8
Wayne State University	8
The University of Texas at Dallas	8
Istituto Di Calcolo E Reti Ad Alte Prestazioni, Rende	8

Worcester Polytechnic Institute	8
Universität Stuttgart	8
UNSW Sydney	8
Sapienza Università di Roma	8
Concordia University	8
Université de Lyon	8
Simon Business School	8
College of Computing & Informatics	8
WPI - Computer Science Department	8
Laboratoire Interdisciplinaire des Sciences du Numérique	8
IEEE	7
Rijksuniversiteit Groningen	7
Hewlett Packard Laboratories	7
University of Piraeus	7
INRIA Institut National de Recherche en Informatique et en Automatique	7
City University of Hong Kong	7
Universität Passau	7
Sogang University	7
Universität Potsdam	7
Université Claude Bernard Lyon 1	7
Universität Wien	7
University of Rochester	7
Université de Versailles Saint-Quentin-en-Yvelines	7
University of California, San Diego	7
Indian Institute of Technology Delhi	7
Tartu Ülikool	7
Istituto di Scienza e Tecnologie dell'Informazione A. Faedo	7
Vienna University of Technology, Distributed Systems Group	7
Hasso-Plattner-Institut für Softwaresystemtechnik GmbH	7
Department of Computer Science	7
Department of Computer Science	7
College of Engineering	7
College of Engineering and Computer Science at Wright State University	7
University of Münster	6
University of Crete	6
Middle East Technical University METU	6
University of Ioannina	6
The University of Auckland	6
Université de Namur	6
Consejo Superior de Investigaciones Científicas	6
Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier	6
Universität Leipzig	6
University of Salford	6
Sabancı Üniversitesi	6
Universität Ulm	6
Japan Advanced Institute of Science and Technology	6

Christian-Albrechts-Universität zu Kiel	6
MITRE Corporation	6
Università degli Studi Roma Tre	6
INSA Lyon	6
Universidad de Zaragoza	6
Simon Fraser University	6
Università degli Studi dell'Aquila	6
Georgia Institute of Technology	6
Beijing University of Technology	6
University of North Texas	6
National Central University	6
University of California, Berkeley	6
University of Cincinnati	6
Tsinghua University	6
Institut de Recherche en Informatique et Systèmes Aléatoires	6
University of California, Los Angeles	6
Universidad de Granada	6
Inha University	6
Université de Rennes	6
Università degli Studi di Verona	6
Universidad de Sevilla	6
Institute of Computer Science	6
IBM Deutschland GmbH	6
Escuela Técnica Superior de Ingenieros Informáticos, Universidad Politécnica de Madrid	6
School of Business Administration	6
<i>Source: Scopus (1985-2024)</i>	

Table of Figure 5

List of countries featured in the DKE journal over the past 40 years

Countries	Frequencies
United States	447
Italy	191
Germany	189
France	139
Spain	137
Netherlands	135
China	122
United Kingdom	111
Australia	105
Canada	96
South Korea	84
Greece	83
India	68
Singapore	65
Brazil	59
Austria	58
Taiwan	54
Hong Kong	39
Belgium	37
Israel	36
Turkey	29
Switzerland	26
Japan	25
Sweden	22
Norway	19
Portugal	16
Tunisia	16
Finland	15
Denmark	14
New Zealand	13
Saudi Arabia	13
Iran	12
Viet Nam	11
Poland	10
Estonia	9
Ireland	9
Algeria	7
Chile	7
Czech Republic	7
Thailand	7
Argentina	6
Mexico	6
South Africa	6

Bulgaria	5
Slovenia	5
United Arab Emirates	5
Cyprus	4
Egypt	4
Hungary	4
Lebanon	4
Luxembourg	4
Bangladesh	3
Jamaica	3
Latvia	3
Malaysia	3
Pakistan	3
Romania	3
Serbia	3
Colombia	2
Cuba	2
Indonesia	2
Jordan	2
Bahrain	1
Bosnia and Herzegovina	1
Costa Rica	1
Croatia	1
El Salvador	1
Fiji	1
Iceland	1
Iraq	1
Kazakhstan	1
Kuwait	1
Libyan Arab Jamahiriya	1
Lithuania	1
New Caledonia	1
Oman	1
Palestine	1
Peru	1
Russian Federation	1
Senegal	1
Slovakia	1
Uganda	1
Yemen	1
Zimbabwe	1
Undefined	37
<i>Source: Scopus (1985-2024)</i>	

Table of Figure 6

List of fundings featured in the DKE journal over the past 40 years

National Science Foundation	104
National Natural Science Foundation of China	79
European Commission	63
Natural Sciences and Engineering Research Council of Canada	36
Conselho Nacional de Desenvolvimento Científico e Tecnológico	31
Australian Research Council	28
European Regional Development Fund	26
Deutsche Forschungsgemeinschaft	24
National Research Foundation of Korea	21
Seventh Framework Programme	21
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior	19
Ministerio de Ciencia e Innovación	18
Ministerio de Educación, Cultura y Deporte	16
Ministerio de Economía y Competitividad	13
National Key Research and Development Program of China	13
National Science Council	13
Bundesministerium für Bildung und Forschung	12
Engineering and Physical Sciences Research Council	12
International Business Machines Corporation	12
Horizon 2020 Framework Programme	11
Ministerio de Ciencia y Tecnología	11
Ministry of Science, ICT and Future Planning	11
Fundação de Amparo à Pesquisa do Estado de São Paulo	10
Ministry of Education, Science and Technology	10
Defense Advanced Research Projects Agency	9
Generalitat Valenciana	9
Nederlandse Organisatie voor Wetenschappelijk Onderzoek	9
Agence Nationale de la Recherche	8
Fundamental Research Funds for the Central Universities	8
Korea Science and Engineering Foundation	8
National Institutes of Health	8
Consiglio Nazionale delle Ricerche	7
European Social Fund	7
Generalitat de Catalunya	7
Georgia State University	7
Horizon 2020	7
Japan Society for the Promotion of Science	7
Ministero dell'Istruzione, dell'Università e della Ricerca	7
Ministry of Education of the People's Republic of China	7
Ministry of Science and Technology of the People's Republic of China	7
National Aeronautics and Space Administration	7
U.S. Department of Energy	7
Air Force Office of Scientific Research	6
European Research Council	6

Ministry of Education	6
National High-tech Research and Development Program	6
National University of Singapore	6
Research Grants Council, University Grants Committee	6
U.S. Department of Defense	6
Fundação de Amparo à Pesquisa e Inovação do Espírito Santo	5
Ministry of Education, Culture, Sports, Science and Technology	5
Ministry of Science and ICT, South Korea	5
Norges Forskningsråd	5
Office of Naval Research	5
Türkiye Bilimsel ve Teknolojik Araştırma Kurumu	5
Academy of Finland	4
Austrian Science Fund	4
China Scholarship Council	4
General Secretariat for Research and Technology	4
Intel Corporation	4
Libera Università di Bolzano	4
Microsoft	4
Ministry of Education - Singapore	4
Ministry of Information and Communication	4
National Council for Scientific Research	4
National Foundation for Science and Technology Development	4
National Institute of Standards and Technology	4
National Research Council	4
Program for New Century Excellent Talents in University	4
Royal Society Te Apārangi	4
Universitat Politècnica de València	4
University of Queensland	4
Verizon	4
Agencia Estatal de Investigación	3
Alexander von Humboldt-Stiftung	3
Anacostia Community Museum	3
Bundesministerium für Verkehr, Innovation und Technologie	3
City University of Hong Kong	3
Comisión Interministerial de Ciencia y Tecnología	3
Connecticut State Emergency Response Commission	3
David and Lucile Packard Foundation	3
Department of Education and Training	3
Deutscher Akademischer Austauschdienst	3
Directorate for Computer and Information Science and Engineering	3
Emory Eye Center	3
Fondo Nacional de Desarrollo Científico y Tecnológico	3
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro	3
Grantová Agentura České Republiky	3
Inha University	3
Institute for Information and Communications Technology Promotion	3

M.S.I. Foundation	3
Michigan State University	3
Natural Science Foundation of Guangdong Province	3
Schweizerischer Nationalfonds zur Förderung der Wissenschaftlichen Forschung	3
Specialized Research Fund for the Doctoral Program of Higher Education of China	3
State of Texas Department of Aging and Disability Services	3
Österreichische Forschungsförderungsgesellschaft	3
AT and T Foundation	2
Alfred P. Sloan Foundation	2
Alfried Krupp von Bohlen und Halbach-Stiftung	2
All India Council for Technical Education	2
Andrew W. Mellon Foundation	2
Association Nationale de la Recherche et de la Technologie	2
Beijing Municipal Commission of Education	2
Beijing Municipal Natural Science Foundation	2
Boeing	2
Bulgarian National Science Fund	2
Bundesministerium für Wissenschaft, Forschung und Wirtschaft	2
California Energy Commission	2
Carleton University	2
Central Intelligence Agency	2
Centre National de la Recherche Scientifique	2
China Postdoctoral Science Foundation	2
Consejo Nacional de Ciencia y Tecnología	2
Consejo Superior de Investigaciones Científicas	2
Department of Defence, Australian Government	2
Direction Générale de l'Armement	2
Erasmus+	2
Financiadora de Estudos e Projetos	2
Fonds Québécois de la Recherche sur la Nature et les Technologies	2
Fonds Wetenschappelijk Onderzoek	2
Fundação de Amparo à Pesquisa do Estado de Minas Gerais	2
German-Israeli Foundation for Scientific Research and Development	2
H2020 Marie Skłodowska-Curie Actions	2
Hasler Stiftung	2
Innovation and Technology Fund	2
Institut national de recherche en informatique et en automatique (INRIA)	2
Instytut Biologii Medycznej Polskiej Akademii Nauk	2
Japan Advanced Institute of Science and Technology	2
Knut och Alice Wallenbergs Stiftelse	2
Korea Advanced Institute of Science and Technology	2
Leverhulme Trust	2
Microsoft Research	2
Ministerio de Ciencia Tecnología y Telecomunicaciones	2
Ministerio de Educación Superior, Ciencia y Tecnología, República Dominicana	2
Ministry of Science and Technology, Taiwan	2

Ministério da Ciência e Tecnologia	2
NOVA Laboratory for Computer Science and Informatics	2
Nanyang Technological University	2
Narodowe Centrum Nauki	2
National Chiao Tung University	2
National Research Council of Science and Technology	2
Natural Science Foundation of Beijing Municipality	2
Natural Science Foundation of Liaoning Province	2
Natural Science Foundation of Shanghai	2
Natural Science Foundation of Zhejiang Province	2
Office of Research and Development	2
Science Foundation Ireland	2
Science and Technology Department of Zhejiang Province	2
Social Sciences and Humanities Research Council of Canada	2
Soehngen Institute of Anaerobic Microbiology	2
State Scholarships Foundation	2
State of New Jersey Department of State	2
Tekes	2
U.S. Air Force	2
U.S. Army	2
U.S. Department of Homeland Security	2
U.S. National Library of Medicine	2
UK Research and Innovation	2
<i>Source: Scopus (1985-2024)</i>	