Prof. Prof. (OM) Dr. rer. pol. Matthias Jarke

Born 28.5.1952 Hamburg/Germany
Married, three children

Education

1980	Dr. rer. pol. in Business Administration (with distinction) , Hamburg University (advisor: Prof. Dr. Dr. h.c. Herbert Jacob); thesis topic: "Monitoring and Control of Container Transportation Systems"
1979	Dipl.-Inform. (equivalent to M.Sc. Computer Science)
1977	Dipl.-Kfm. (equivalent to MBA)
1972-1977	Double degree studies in Computer Science, Physics, and Business Administration, Hamburg University, Germany

Employment History

2010-2015	Chairman, Fraunhofer ICT Group & Member, Fraunhofer Presidency
2007-2012	Inaugural Dean, IT and Engineering, GUtech German University of Technology in Oman, Muscat
2000-2021	Executive Director, Fraunhofer FIT Institute for Applied Information Technology, Sankt Augustin and Aachen, Germany
1992-2000	Chairman, Computer Science Department, RWTH Aachen University
1991-2021	Professor of Information Systems and Databases (Informatik 5), RWTH Aachen University
1986-1990	Professor of Dialog-Oriented Systems, Passau University
1981-1986	Assistant/Associate Professor of Information Systems, Stern School of Business, New York University (early promotion and tenure 1985)
1977-1981	Research Assistant, Operations Research, Hamburg University

Honors and Awards

2020	RWTH Fellow ("professor of the year" award of the university)
2020	Peter Chen Award (lifetime award in conceptual modeling)
2018	Fraunhofer Münze (highest distinction for institute directors)
2014	Fellow, ACM Association Computing Machinery (first in NRW state)
2013	Member, acatech National Academy of Science and Engineering
2012	Fellow, GI German Informatics Society
2012	Honorary Adjunct Professor, GUTech, Muscat Oman
2012	Fraunhofer Medaille
2006-	Who is Who in the World
1995-	Several best paper awards, most recently at CAiSE 2020 Grenoble
1972-1977	Scholarship, Studienstiftung des Deutschen Volkes

Research Areas

(Meta-)Database implementation (1976-)

- Co-developer of Pascal/R first database programming language, including first full relational calculus implementation in Europe;
- Relational and deductive query optimization: first survey paper structuring the field, one of the most-cited database papers until early 1990's [JK84], and optimizing deductive frontend to RDB
- Widely used deductive meta database ConceptBase [JGJ*95], first KBMS operational via internet across the Atlantic in 1989
- Data quality management and metadata management: EU-Projects Compulog, DWQ [JLVV99]
- Co-Founder, International Data Space Initiative (2014-)

- Co-Speaker, DFG Excellence Cluster "Internet of Production" (2019-2026)

Requirements and Information Systems Engineering (1986-)	• Co-founded Basic Research in Requirements Engineering by coordinating all EU Basic Research Projects in RE up to 2000 (DAIDA, NATURE, CREWS) • frequently cited contributions to conceptual modeling languages [MBJK90], Scenarios [WPJ98] and Tracebility [RJ01] • Co-founded DFG-funded cross-disciplinary collaborative research centers with cultural sciences (SFB 427 Media and Cultural Communication, 1998-2008) and chemical engineering (SFB 476 IMPROVE, 1996-2006) • Co-Founder, Fraunhofer Center Digital Energy Aachen (2019-)
(Mobile) Cooperative Information Systems (1978-)	• Ph.D. research integrating conceptual models (ER/Petrinet) with optimization of worldwide container transportation (1978-1980) • Supervised two of the earliest Ph.D. theses on distributed group decision and negotiation support systems (1983-1985) [JJS87] • Participated in BSCW project with Fraunhofer FIT, cited as the worldwide first open cloud system on the Internet (1995-1999); • Community Support in the „Long Tail" of the Internet (ATLAS lightweight application server), including web-based learning • Deputy Coordinator, DFG Excellence Cluster Ultra-Highspeed Mobile Information and Communication (UMIC) • Mobile web servers and P2P data management in cultural reconstruction, e.g. Afghanistan's Bamiyan Valley
Grants	• Annual grant sum >2 m€ Informatik 5, >15 m€ in Fraunhofer FIT

Publications

Books	• Several research monographs, including "Foundations of Data Warehouse Quality" (Springer, 2nd ed. 2003) and "Meta Modeling for Method Engineering" (MIT Press 2010) • Over 30 edited volumes and conference proceedings • Editor of Special Issues in Communications of the ACM (1998), IEEE Transactions on Software Engineering (1992 & 1998), RE Journal (1999), WI/BISE (2010, 2014, 2019), ACM/TMIS (2013)
Refereed Papers	Over 450 refereed publications in DBLP database, including • journals CACM, ACM-TOIS, -TOSEM, TIOT, -JDIQ, IEEE-TSE, -TKDE, JIIS, JMIS, MISQ, JAIS, DSS, IS, VLDB Journal, DKE, IJCIS, IEEE Software, Computers&Chemical Engineering, …; • international conferences CAiSE, ER, ICSE, ESEC, RE, ICIS, ECIS, WI, VLDB, SIGMOD, EDBT, ICDT, MDM, EC-TEL, ICWL
Editorial Boards	• Chief Editor, Information Systems (Elsevier), 1994-2003 • Current editor: ACM TMIS, Wirtschaftsinformatik/BISE, Information & Management, RE Journal, J.UCS, Organizational Computing & Electronic Commerce, Data & Knowledge Eng. • Previous: ACM-TOIS, IEEE TSE, JAIS, DSS, SIAM J. Computing
Conference Program Chair/General Chair	• International DB/IS conferences VLDB (1994, 1997), EDBT (1994), CAiSE (1999, 2014), CoopIS (1994), SSDBM (1998), ECSCW (2002), Mobile HCI (2009), ICWL (2010), ER (2014) • Track program chair: ICIS (1998, 2010, 2013), ECIS (2000) • National : Informatik (1997), KI (2002), BTW (2007), MuC 2016
SUNSite Central Europe	Since 1995 one of the largest scientific web servers in Germany, helping rapid uptake of WWW technologies • First large-scale browser distributions (several million downloads of Netscape and Internet Explorer in 1995-1997) • First website, Aachen City, German Track and Field Society

- CEUR workshop proceedings series with over 2500 volumes
- Mirror site for important projects such as DBLP, Dagstuhl

Teaching and Research Training

1996-	First *Hightech Entrepreneurship courses*, RWTH Aachen University
2001-	Founded *Bonn-Aachen International Center for Information Technology (B-IT)*, pioneering top-level English language master programs in applied IT for top international bachelor graduates; Coordinator, *B-IT Research School* of Doctoral Training
1984-	Supervised four habilitations and over 90 doctoral dissertations at New York University, Passau University, RWTH Aachen University, over 30 professors among graduates and postdocs

Community Service

2000-2007	Elected senior reviewer, DFG-Fachkollegium Praktische Informatik
2000-2007	Treasurer, then President, Gesellschaft für Informatik (GI) e.V.;

- Scientific coordinator of BMBF-Science Year „Informatikjahr 2006" with over 400 regional events throughout Germany; in this year, the German government established its first Hightech strategy, started annual series of Chancellor Merkel IT summits

2009-2010	Vice President, ERCIM European Research Consortium for Informatics and Mathematics
1998-2001	Founding Vice President, Association for Information Systems (AIS)
2000-	Member of advisory and supervisory boards, e.g.

- Program Board, Hessian excellence program LOEWE
- Chair, Supervisory Board (Hochschulrat), TH Cologne
- Past Chair, Advisory board, OFFIS e.V. Oldenburg
- Past Chair, Advisory board Computer Science, University Vienna
- Past Member, CeBIT Fair Committee, Hannover
- Past Member, CONNECT Advisory Forum, EU Commission

10 most-cited papers (from over 700, > 22.700 Google Scholar cites 08/2022, H-index 74)

RJ01	Ramesh, M. Jarke: Towards reference models for requirements traceability. *IEEE Trans. Software Eng. 27*, 1 (2001): 58-93 (1327)
MBJK90	J. Mylopoulos, A. Borgida, M. Jarke, M. Koubarakis: Telos – representing knowledge about information systems. *ACM Trans. Information Systems 8*, 4 (1990): 325-362 (1228 citations)
JK84	M. Jarke, J. Koch: Query optimization in database systems. *ACM Computing Surveys 16*, 2 (1984): 111-152 (1000)
MLVV03	M. Jarke, M. Lenzerini, Y. Vassiliou, P. Vassiliadis: *Fundamentals of Data Warehouses*. Springer, 2nd ed 2003, also Polish, Chinese (901)
WPJ98	K. Weidenhaupt, K. Pohl, M. Jarke: Scenarios in system develop-ment – current practice. *IEEE Software 15*, 2 (1998): 34-45 (best papers ICRE 98) (632)
JGJ*95	M. Jarke, R. Gallersdörfer, M.A. Jeusfeld, H.W. Nissen, M. Staudt: ConceptBase – a deductive object base for metadata management. *Journal of Intelligent Information Systems 4*, 2 (1995): 167-192 (461)
CJF07	M.A. Chatti, M. Jarke, D. Frosch-Wilke : The future of eLearning: a shift to knowledge networking and social software. *Intl. J. Knowledge & Learning 3*, 4-5 (2007): 404-420 (405)
JBC98	M. Jarke, X.T. Bui, J.M. Carroll: Scenario management – an interdisciplinary approach. *RE Journal 3*, 3-4 (1998): 155-173 (362)
JJQV99	M. Jarke, M. Jeusfeld, C. Quix, P. Vassiliadis: Architecture and quality of data warehouses – an extended repository approach. *Inform. Syst 24*, 3 (1999): 15-45 (best papers CAISE 1998) (341)

JJS87   M. Jarke, M.T. Jelassi, M.F. Shakun: MEDIATOR – towards a negotiation support system. *European J. Operational Research 31*, 3 (1987): 314-334 (328)