CURRICULUM VITAE

Tore J M Risch
Professor

APPOINTMENTS:

10/1999 – present University of Uppsala, Sweden
Professor in Database Technology. Founded Uppsala Database Laboratory (*http://user.it.uu.se/~udbl*) doing research on data integration, extensible databases, query processing, heterogeneous databases, and engineering databases. Developed a research program (IEIS) on data integration for engineering applications. External funding by SSF, KAW, EC, NUTEK, and TFR.

5/1992 – 9/1999 University of Linköping, Sweden
Professor in Engineering Databases working on database support for engineering and telecom applications. Work on data integration, extensible databases, query processing, heterogeneous databases, active databases, and databases with real-time query processing. Responsible for teaching database technology on the undergraduate level. Developed several PhD level courses on modern database technology. Produced 8 Licentiates and 6 PhDs. Organized two international conferences. Member of the ACTNET network on active databases. External funding by NUTEK, CENIIT, SSF, and TFR.

10/1991 - 4/1992 Hewlett-Packard Laboratories, Palo Alto, USA
Computer Scientist working on query optimization and storage management in a main-memory based Object-Oriented DBMS.

3/1989 - 9/1991 Stanford University
Visiting scientist from HP Laboratories in the database group at Stanford University lead by professor Gio Wiederhold. Research on future information systems where 'mediators' between application programs and databases handle, e.g., knowledge partitioning, data integration, and monitoring data bases for 'interesting' state changes. For the latter I developed an extension to the Object-Oriented DBMS Iris where constraints were specified that linked database data to processes, and where corrective client actions (e.g. forward chaining) were initiated when constrained data changed significantly.

1/1988 - 2/1989 Hewlett-Packard Laboratories, Palo Alto
Computer scientist working with the object oriented DBMS Iris, doing the initial work on monitoring databases.

9/1983 - 12/1987 Syntelligence, Inc., Sunnyvale, USA
Principal architect, designer and developer of the declarative knowledge representation language Syntel, including its inference engine, its integrated programming environment, and parts of its user interface building tools and its supporting knowledge engineering tools. Syntel represents knowledge using a functional data model, which is very natural for the financial knowledge bases developed by Syntelligence; all knowledge bases developed by Syntelligence are completely represented in Syntel. The inference engine automatically maintains derived data and controls the user interface. Syntel is a commercial product (see *http://www.syntelsoft.com/*).

4-8/1983 SRI International, Menlo Park, USA
Computer scientist developing extensions of the expert system Prospector to handle quantitative and uncertain knowledge.

1/1982-4/1983 University of Uppsala, Sweden
Research associate extending Prolog to interface to a relational database system.

1/1981-1/1982 IBM Almaden Research Center, San Jose, USA
Post doctoral fellow developing a system for knowledge representation using definitional equations interfaced to System R.
Developed an extension to Lisp with abstract data types supporting function overloading.

1/1975-1/1981 Uppsala University, Sweden
Research associate working with artificial intelligence, database, and compiler technologies (Erik Sandewall's group).
As basis for my PhD thesis, I developed a multi-DBMS Data Dictionary system, Lidam, that contained knowledge of how to generate optimized database access programs for two different DBMS (IMS and Mimer) using a high level query language.
I also developed a 4GL system, Mimer-PG, based on the experiences from Lidam. Mimer-PG was a successful commercial product sold by Mimer Inc.
Developed a system, PMG, for generating programs to analyze and transform Lisp programs.

2/1974-12/1974 Research Institute of National Defense (FOA), Sweden
Military service as research associate.
Developed a fast Lisp interpreter for IBM computers where a class of recursive Lisp functions were interpreted iteratively. The interpreter was heavily used by Ericsson Inc. until the beginning of the 80's for compilation of programs for their AXE telephone switches.

2/1972-1/1974 Uppsala University, Sweden
Research associate. Developed a system for automatic transformation of a large class of recursive Lisp programs into iterative ones.

EDUCATION:

MSc. (Swedish 'Fil.Kand.'), Mathematics and Computer Science 1971, Uppsala University, Sweden
PhD, Computer Science 1978, Linköping University, Sweden

PUBLICATIONS:

Most of these publications can be downloaded from *http://user.it.uu.se/~torer/publ*. Notice that, unlike for many other disciplines, the primary database conferences VLDB, SIGMOD, ICDE, and EDBT are as highly regarded as the best journals. The acceptance rates of primary database conferences are in the range 13-25% and for other database conferences normally in 20-40%.

Book Chapters (peer reviewed):

[1] M.Sabesan and T.Risch: Adaptive Parallelization of Queries Calling Dependent Data Providing Web Services, chapter in D.Agrawal, K.S.Candan, W-S.Li (eds.): *New Frontiers in Information and Software as Services*, ISBN 978-3-642-19293-7, Springer, 2011.

[2] T. Risch, H. Balakrishan, J. Gehrke, L. Girod, M. Ivanova, S. Madden, R. Newton, B. Panda, M. Riedewald, and E. Zeitler: Analyzing data streams in scientific applications, chapter in: Arie Shoshani and Doron Rotem (editors): *Scientific Data Management: Challenges, Existing Technology, and Deployment*, CRC Press, 2009.

[3] T.Risch: Distributed Architecture, regular entry in: Ling Liu and M. Tamer Özsu (editors): *Encyclopedia of Database Systems*, Springer, 2009.

[4] T.Risch: Mediators for Querying Heterogeneous Data, in M.P.Singh (ed.): *The Practical Handbook of Internet Computing*, ISBN 1584883812, Chapman & Hall/CRC, USA, June 2004.

[5] T.Risch: Functional Queries to Wrapped Educational Semantic Web Meta-data in P.Gray, L.Kerschberg, P.King, and A.Poulovassilis (eds.): *Functional Approach to Data Management - Modeling, Analyzing and Integrating Heterogeneous Data*, Springer, ISBN 3-540-00375-4, 2003.

[6] T.Risch, V.Josifovski, and T.Katchaounov: Functional Data Integration in a Distributed Mediator System, in P.Gray, L.Kerschberg, P.King, and A.Poulovassilis (eds.): *Functional Approach to Data Management - Modeling, Analyzing and Integrating Heterogeneous Data*, Springer, ISBN 3-540-00375-4, 2003.

[7] K.Orsborn, T.Risch, and S.Flodin: Representing Matrices Using Multi-Directional Foreign Functions, in P.Gray, L.Kerschberg, P.King, and A.Poulovassilis (eds.): *Functional Approach to Data Management - Modeling, Analyzing and Integrating Heterogeneous Data*, Springer, ISBN 3-540-00375-4, 2003.

[8] T.Risch and M. Sköld: Monitoring Complex Rule Conditions, in N. Paton (ed.): *Active Rules in Database Systems*, Springer-Verlag, New York, ISBN 0-387-98529-8, 1999.

[9] D.H. Fishman, D.Beech, J.Annevelink, E. C.Chow, T,Connors, J.W. Davis, W.Hasan, C.G. Hoch, W.Kent, S.Leichner, P.Lyngbæk, B.Mahbod, M-A.Neimat, T.Risch, M-C.Shan, and W.K.Wilkinson: Overview of the Iris DBMS. In Alfonso F. Cardenas, Dennis McLeod (Eds.*): Research Foundations in Object-Oriented and Semantic Database System*. Prentice-Hall, ISBN 0-13-806340-0, 1990.

[10] D.H.Fishman, J.Annevelink, E.Chow, T.Connors, J.W.Davis, W.Hasan, C.G.Hoch, W.Kent, S.Leichner, P.Lyngbaek, B.Mahbod, M.A.Neimat, T.Risch, M.C.Shan, and W.K.Wilkinson: Overview of the Iris DBMS, in W.Kim, F.H.Lochovsky (eds.*): Object-Oriented Concepts, Databases, and Applications*, ACM Press, ISBN 0-201-14410-7, 1989.

Journal Articles (peer reviewed):

[11] M.Sabesan and T.Risch: Adaptive Parallelization of Queries to Data Providing Web Service Operations, accepted to *Transactions on Large-Scale Data- and Knowledge-Centered Systems*, Springer, 2012.

[12] E.Zeitler and T.Risch: Massive scale-out of expensive continuous queries, *Proceedings of the VLDB Endowment*, ISSN 2150-8097, Vol. 4, No. 11, p 1181-1188, 2011

[13] M. Sabesan, T. Risch, and F. Luan: Automated Web Service Query Service, *International Journal of Web and Grid Services (IJWGS)*, Inderscience, Volume 6, Number 4, 2010.

[14] S. Stefanova and T. Risch: SPARQL Queries to RDF Views of Topic Maps, *International Journal of Metadata, Semantics and Ontologies (IJMSO)*, Inderscience, Vol. 5, No. 1, 2010.

[15] Haoxue Ma and T.:Risch: A Database Approach for Information Communication in a Peer-to-Peer Collaborative CAD Environment *Software - Practice and Experience J.*, Vol. 37, No. 11, John Wiley & Sons, Ltd., 2007.

[16] S.Koch, T.Risch, W.Schneider and I.V.Wagner: An Object-relational Model for Structured representation of Medical Knowledge , *International Journal of Computerized Dentistry*, No 9, December 2006, pp 237-252

[17] Ph. Thiran, T. Risch, C. Costilla, J. Henrard, Th. Kabisch, J. Petrini, W-J. van den Heuvel, and J-L. Hainaut: Report on the Workshop on Wrapper Techniques for Legacy Data *Systems SIGMOD Record*, Vol. 34, No. 3, Sept. 2005, pp. 85-86.

[18] M.Nyström and T.Risch: Engineering Information Integration using Object-Oriented Mediator Technology, *Software - Practice and Experience J.,* Vol. 34, No. 10, pp 949-975, John Wiley & Sons, Ltd., 2004.

[19] V.Josifovski and T.Risch: Query Decomposition for a Distributed Object-Oriented Mediator System . *Distributed and Parallel Databases J.*, 11(3), pp 307-336, Kluwer, May 2002.

[20] W.Litwin and T.Risch: LH*g : a High-availability Scalable Distributed Data Structure by Record Grouping. *IEEE Transactions on Knowledge and Data Engineering*, 14 (4), pp 923-927, July/August 2002.

[21] H.Lin, T.Risch, and T.Katchanounov: Adaptive data mediation over XML data. In special issue on Web Information Systems Applications *of Journal of Applied System Studies (JASS),* Cambridge International Science Publishing, 3(2), 2002.

[22] J.Fredriksson, P.Svensson, and T.Risch: Mediator-Based Evolutionary design and Development of Image Meta-Analysis Environments, *Journal of Intelligent Information Systems*, 17(2-3), pp 301-322, 2001.

[23] P.Roland, G.Svensson, T.Lindeberg, T.Risch, P.Baumann, A.Dehmel, J.Fredriksson, H.Halldorson, L.Forsberg, J.Young, and K.Zilles: A database generator for human brain imaging, *TRENDS in Neurosciences*, 24(10), October 2001.

[24] T.Risch and V.Josifovski: Distributed Data Integration by Object-Oriented Mediator Servers. *Concurrency and Computation: Practice and Experience J.* 13(11), John Wiley & Sons, September, 2001.

[25] V.Josifovski and T.Risch: Functional Query Optimization over Object-Oriented Views for Data Integration, *Journal of Intelligent Information Systems (JIIS),* Kluwer, 12(2-3), 1999. April 1999.

[26] Gustav Fahl and Tore Risch: Query Processing over Object Views of Relational Data*, VLDB Journal*, Springer Verlag, 6(4), pp 261-281, November 1997.

[27] T.Risch and M.Sköld: Active Rules based on Object-Oriented Queries, in special issue on Active Databases of *IEEE Data Engineering Bulletin*, 15(1-4), pp 27-30, Dec. 1992.

[28] W.Litwin and T.Risch: Main Memory Oriented Optimization of OO Queries using Typed Datalog with Foreign Functions, in special section on Main Memory Databases *of IEEE Transactions on Knowledge and Data Engineering.* Vol.4, No.6, Dec. 1992.

[29] T.Risch, R.Reboh, P.Hart, and R.Duda: A functional approach to integrating database and expert systems. In *Communications of the ACM*, 31, 12 (Dec. 1988).

[30] R.O.Duda, P.E.Hart, R.Reboh, J.Reiter, and T.Risch: SYNTEL: Using a Functional Language for Financial Risk Assessment', *IEEE Expert* 2, 3 (Fall 1987).

[31] M.Jainz, T.Risch, et al: A Data Manager for the Health Information System Berlin. In *Computer Programs in Biomedicine* 6, 1976

Primary Conference Articles (peer reviewed):

[32] G.Gidofalvi, T.B. Pedersen, T.Risch, and E.Zeitler: Highly Scalable Trip Grouping for Large Scale Collective Transportation Systems, *Proc. 11th International Conference on Extending Database Technology, EDBT 2008*, Nantes, France, March 2008.

[33] M.Ivanova and T.Risch: Customizable Parallel Execution of Scientific Stream Queries, *31st International Conference on Very Large Databases, VLDB2005*, Trondheim, Norway, 2005.

[34] W.Neidl, B.Wolf, C.Qu, S.Decker, M.Sinek, A.Naeve, M.Nilsson, M.Palmér, and T.Risch: EDUTELLA: A P2P Networking Infrastructure Based on RDF. Presented at *11th International World Wide Web Conference*, Honolulu, Hawaii, USA, May 2002.

[35] V.Josifovski and T.Risch: Integrating Heterogeneous Overlapping Databases through Object-Oriented Transformations, presented at *25th Intl. Conf. On Very Large Databases*, Edinburgh, Scotland, September 1999.

[36] L.Lin and T.Risch: Querying Continuous Time Sequences, *24th Intl. Conf. On Very Large Databases*, New York City, August 1998.

[37] S.Grufman, F.Samson, S.M.Embury, P.M.D. Gray, and T.Risch: Distributing Semantic Constraints Between Heterogeneous Databases*. The 13th International Conference on Data Engineering (ICDE'97),* Birmingham, England, April 7-11, 1997, (http://user.it.uu.se/~udbl/publ/icde97.pdf).

[38] J. S. Karlsson, W. Litwin, and Tore Risch: LH*lh A Scalable High Performance Data Structure for Switched Multicomputers. *The Fifth International Conference on Extending Database Technology (EDBT'96),* Avignon, France, March 25-29, 1996.

[39] M. Sköld and T. Risch: Using Partial Differencing for Efficient Monitoring of Deferred Complex Rule Condition*. The 12th International Conference on Data Engineering (ICDE'96),* New Orleans, Louisiana, Feb. 24-Mar 1, 1996.

[40] S. Flodin and T. Risch: Processing Object-Oriented Queries with Invertible Late Bound Functions. *The 21st International Conference on Very Large Databases (VLDB'95),* Zurich, Switzerland, September 11-15, 1995.

[41] T.Risch: Monitoring Database Objects. *The 15th Conf. on Very Large Databases*, Amsterdam, Holland, 1989.

[42] P.Lucas and T.Risch: Representation of factual information by equations and their evaluation. *The 6th Intl. Conf. on Software Engineering,* Tokyo, Japan, Sept. 13-16, IEEE, New York, 1982.

[43] T.Risch: Production program generation in a flexible data dictionary system. *The 6th Conf. on Very Large Databases,* Montreal, Canada, Oct. 1-3, 1980.

Conference Articles (peer reviewed):

[44] A.Andrejev and T.Risch: Scientific SPARQL: Semantic Web Queries over Scientific Data, presented at *The 3rd International Workshop on Data Engineering Meets the Semantic Web (DESWEB 2012)*, Washington DC, USA, 2012.

[45] M.Zhu and T.Risch: Querying Combined Cloud-Based and Relational Databases, presented at *The 2011 International Workshop on Data Cloud (D-CLOUD 2011)*, December 12, Hong Kong, 2011.

[46] S.Toor, M.Sabesan, S.Holmgren, and T.Risch: A Scalable Architecture for e-Science Data Management, presented at *7th IEEE International Conference on e-Science, Stockholm, Sweden*, 5th -8th December, 2011.

[47] S.Stefanova and T.Risch: Optimizing Unbound-property Queries to RDF Views of Relational Databases, presented at *The 7th International Workshop on Scalable Semantic Web Knowledge Base Systems (SSWS2011)*, Bonn, Germany, October 2011.

[48] E. Zeitler and T.Risch: Scalable Splitting of Massive Data Streams, in *Proc. 15th Conf. on Database Systems for Advanced Application, DASFAA 2010.*, Tsukuba, Japan, 1-4 April, 2010

[49] M. Sabesan and T.Risch: Web Service Query Service, *Proc. 11th International Conference on Information Integration and Web-based Applications & Services*, 14-16 December, Kuala Lumpur, Malaysia, 2009.

[50] M. Johanson, L. Karlsson, and T. Risch: Relaying Controller Area Network Frames over Wireless Internetworks for Automotive Testing Applications, *The Fourth International Conference on Systems and Network Communications, ICSNC 2009*, September 20-25, 2009, Porto, Portugal.

[51] R.Fomkin and T.Risch: Optimization and Execution of Complex Scientific Queries over Uncorrelated Experimental Data, *Proc. 21st International Conference on Scientific and Statistical Database Management (SSDBM 2009),* New Orleans, Louisiana USA, June 2009.

[52] M. Sabesan and T.Risch: Adaptive Parallelization of Queries over Dependent Web Service Calls, to be presented at *1st IEEE Workshop on Information & Software as Services, WISS 2009*, Shanghai, China, March, 2009.

[53] S.Stefanova and T.Risch: Viewing and Querying Topic Maps in terms of RDF, *SEMMA2008: First International Workshop on Semantic Metadata Management and Applications*, Teneriffe, Spain, June 2008.

[54] J.Petrini and T.Risch: SWARD: Semantic Web Abridged Relational Databases, *Proc. 6th International Workshop on Web Semantics, WEBS 2007*, Regensburg, Germany, September 2007.

[55] R.Fomkin and T.Risch: Cost-based Optimization of Complex Scientific Queries, *Proc. 19th International Conference on Scientific and Statistical Database Management (SSDBM 2007)* , Banff, Canada, July 9-11, 2007.

[56] E.Zeitler and T.Risch: Using stream queries to measure communication performance of a parallel computing environment. *Proc. 1st International Workshop on Distributed Event Processing, Systems and Applications (DEPSA)*, Toronto, Canada, June 29, 2007.

[57] M.Sabesan and T.Risch: Web Service Mediation Through Multi-level Views, *Proc. International Workshop on Web Information Systems Modeling (WISM 2007)*, Trondheim, Norway, June 12, 2007.

[58] M.Sabesan, T.Risch, G.Wikramanayake: Querying Mediated Web Services , *8th International Information Technology Conference, IITC 2006*, Colomo, Sri Lanka, 2006

[59] E.Zeitler and T.Risch: Processing high-volume stream queries on a supercomputer, *ICDE Ph.D. Workshop 2006* (http://ir.iit.edu/~waigen/icde06phd/), Atlanta, GA, April 2006, http://user.it.uu.se/~udbl/publ/ICDEWS2006.pdf

[60] R.Fomkin and T.Risch: Framework for Querying Distributed Objects Managed by a Grid Infrastructure, *1st International Workshop on Data Management in Grids (DMG'05),* Trondheim, Norway, September 2-3, 2005.

[61] J.Petrini and T.Risch: Processing queries over RDF views of wrapped relational databases, *1st International Workshop on Wrapper Techniques for Legacy Systems, WRAP 2004*, Delft, Holland, November 2004.

[62] R.Fomkin and T.Risch: Managing Long Running Queries in Grid Environment, *1st Intl. Workshop on GRID Computing and its Applications (GADA'04)*, Lacarna, Cyprus, Oct. 2004.

[63] M.Nyström and T.Risch: Optimising Mediator Queries to Distributed Engieering Systems, *9th International Conference on Database Systems for Advanced Applications (DASFAA 2004)*. Jeju Island, Korea, March 17-19, 2004.

[64] M.G.Koparanova and T.Risch: High-performance Stream-oriented GRID Database Manager for Scientific Data, *Proc. 1st European Across Grids Conference*, Universidad de Santiago de Compostela, Spain, Feb. 13-14, 2003.

[65] T.Katchaounov, V.Josifovski, and T.Risch: Scalable View Expansion in a Peer Mediator System, *Proc. 8th International Conference on Database Systems for Advanced Applications (DASFAA 2003),* Kyoto, Japan, March 2003.

[66] T. Katchaounov, T. Risch, and S. Zürcher: Object-Oriented Mediator Queries to Internet Search Engines, *International Workshop on Efficient Web-based Information Systems (EWIS),* Montpellier, France, September 2nd, 2002.

[67] T,Risch, M.Koparanova, and B.Thide: High Performance GRID Database Manager for Scientific Data, *Proc. 4th Distributed Data and Structures, WDAS'03*, Paris, France, pp 99-106, Carleton Scientific, ISBN 1-894145-13-5, 2002

[68] W.Litwin, T.Risch, and Th.Schwarz: An Architecture for a Scalable Distributed DBS: Application to SQL Server 2000, *2nd Intl. Workshop on Cooperative Internet Computing (CIC 2002)*, Hong Kong, August, 2002.

[69] M.Koparanova and T.Risch: Completing CAD Data Queries for Visualization, *International Database Engineering and Applications Symposium (IDEAS 2002),* Edmonton, Alberta, Canada, July 17-19, 2002.

[70] V.Josifovski, T.Katchaounov, and T.Risch: Join Strategies for Distributed Mediation. Presented at *5th East-European Conference on Advances in Databases and Information Systems (ADBIS2001)*, Vilnius, Lithuania, September 25-28, 2001.

[71] Y. Ndiaye, A. W. Diène, W. Litwin, and Tore Risch: AMOS-SDDS: A Scalable Distributed Data Manager for Windows Multicomputers, Presented *at 14th International Conference on Parallel and Distributed Computing Systems*, Dallas, Texas, August 8-10, 2001.

[72] K.Cassel and T.Risch: An Object-Oriented Multi-Mediator Browser. Presented at 2nd *International Workshop on User Interfaces to Data Intensive Systems*, Zürich, Switzerland, May 31 - June 1, 2001

[73] T.Katchanouov, V.Josifovski, and T.Risch: Distributed View Expansion in Object-Oriented Mediators. In *Proc. 5th Intl. Conference on Cooperative Information Systems, CoopIS'00,* Eilat, Israel, Lecture Notes in Computer Science 1901, Springer Verlag, 2000, pp 144-149.

[74] Y.Ndiaye, A.W.Diene, W.Litwin, and T.Risch: Scalable Distributed Datastructures for High-Performance Databases. *In Proc. 3rd Workshop on Distributed Data and Structures (WDAS'2000)*, L'Aquila, Italy, 2000.

[75] H. Lin, T. Risch, and T.Katchaounov: Object-Oriented Mediator Queries to XML Data. In *Proc. 1st Intl. Conf. on Web Information Systems Engineering, (Vol 2),* Hong Kong, China, June 2000, pp 38-45.

[76] V.Josifovski, T.Katchaounov, and T.Risch: *Optimizing Queries in Distributed and Composable Mediators*, presented at *4th Conference on Cooperative Information Systems, CoopIS'99*, Edinburgh, Scotland, September 1999.

[77] V.Josifovski and T.Risch: *Distributed Mediation using a Light-Weight OODBMS*, presented at *1st ECOOP Workshop on Object-Oriented Databases*, Lisbon, Portugal, June 1999.

[78] W.Litwin, J.Menon, T.Risch, and T.J.E.Schwarz: Design Issues for Scalable Availability LH* Schemes with Record Grouping, *DIMACS Workshop on Distributed Data and Structures*, Princetone U., Carleton Scientific, May 1999.

[79] S.Flodin, K.Orsborn, and T.Risch: Using Queries with Multi-Directional Functions for Numerical Database Applications, *2nd East-European Symposium on Advances in Databases and Information Systems - ADBIS'98,* Poznan (Poland), September 1998.

[80] V.Josifovski and T.Risch: Calculus-based Transformations of Queries over Object-Oriented Views in a Database Mediator System, *3rd IFCIS International Conference on Cooperative Information Systems*, New York City, August 1998.

[81] L.Lin and T.Risch: Using a Sequential Index in Terrain-Aided Navigation. *The Sixth International Conference on Information and Knowledge Management (CIKM'97)*, (ACM), Las Vegas, Nevada, USA, November 1997.

[82] T.Padron-McCarthy and T.Risch: Optimizing Performance-Polymorphic Declarative Database Queries. *Second International Workshop on Real-Time Databases (RTDB'97),* Burlington, Vermont, USA, September 18-19, 1997.

[83] L.Lin, T.Risch, M.Sköld, and D.Badal: Indexing Values of Time Sequences. *The Fifth International Conference on Information and Knowledge Management (CIKM'96)*, Rockville, Maryland, USA, November 12-16, 1996.

[84] K.Orsborn and T.Risch: Next Generation of O-O Database Techniques in Finite Element Analysis. *The Third International Conference on Computational Structures Technology,* Budapest, Hungary, August 21-23, 1996.

[85] T. Padron-McCarthy and T. Risch: Performance-Polymorphic Execution of Real-Time Queries. *First Workshop on Real-Time Databases: Issues and Applications, (RTDB-96),* Newport Beach, California, USA, March 7-8, 1996.

[86] E. Falkenroth, T. Risch, and A. Törne: Using an embedded active database in a control system architecture. *Intl. Conf. on Application of Databases (ADB-95),* Santa Clara, USA, Dec. 1995.

[87] M. Sköld, E. Falkenroth, and T. Risch: Rule Contexts in Active Databases - A Mechanism for Dynamic Rule Grouping. *Rules in Active Databases (RIDS'95),* Athens, Greece, Sept. 25-27, 1995.

[88] Peter Loborg, Tore Risch, Martin Sköld, and Anders Törne: Active Object Oriented Databases in Control Applications. *The 19th Euromicro Conference 1993,* Barcelona, Spain, Sept. 1993.

[89] G.Fahl, T.Risch, and M.Sköld: AMOS - An Architecture for Active Mediators. *Workshop on Next Generation Information Technologies and Systems (NGITS 93),* Haifa, Israel in June 28-30, 1993.

[90] T.Risch and G.Wiederhold: Building Adaptive Applications using Active Mediators. *Intl. Conf. on Database and Expert Systems Applications (DEXA'91),* Springer-Verlag, 1991.

[91] M.A. Ketabchi, S. Mathur, T. Risch and J. Chen: Comparative analysis of RDBMS and OODBMS: a case study**.** *Proceedings of the COMPCON IEEE Computer Society International Conference*, San Francisco, California, 1990, pp. 528-537.

[92] T.Risch: Intensionally Integrating Database and Expert Systems. *1988 Intl. Symposium on Lucid and Intensional Programming,* April 7-8, University of Victoria, B.C., Canada, 1988.

[93] R.Reboh and T.Risch: Syntel: Knowledge programming using functional representations. *AAAI Conf. -86*, Philadelphia, Pa., Aug. 11-16, Morgan Kaufman, Los Altos, Calif., 1986.

[94] T.Risch: A flexible and external data dictionary system for program generation. *Intl. Conf. on Data Bases,* Aberdeen, UK, July 2-4, Heyden, London, 1980.

[95] T.Risch et al: A portable and user oriented database management system and its implementation. *MEDINFO Conference,* Tokyo, Japan, 1980.

Textbook:

[96] T.Padron-McCarthy and T.Risch: *Databasteknik*, Studentlitteratur, Sweden, ISBN: 9144044496, 2005.

Conference Proceeding:

[97] W.Litwin and T.Risch (eds.): Applications of Databases, *1st Intl. Conf., ADB-94*, Lecture Notes in Computer Science 819, Springer Verlag, ISBN 3-540-58183-9, 1994.

Patents:

[98] U.S. Patent No. 4,866,634: R.Reboh and T.Risch: *Data-Driven, Functional Expert System Shell (http://www.freepatentsonline.com/4866634.html)*

[99] U.S. Patent No. 5,133,075: T.Risch: *Method of Monitoring Changes in Attribute Values of Object in an Object Oriented Database (http://www.freepatentsonline.com/5133075.html)*

[100] U.S. Patent No. 5,471,629: T.Risch: *Method of monitoring changes in an object-oriented database with tuned monitors (http://www.freepatentsonline.com/5471629.html)*

[101] U.S. Patent No. 6,173,415: W.Litwin, J.Menon, and T.Risch: *System for Scalable Distributed Data Structure Having Scalable Availability(http://www.freepatentsonline.com/6173415.html)*.

[102] U.S. Patent No. 6,122,754: W.Litwin, J.Menon, and T.Risch*: Method and System for Data Recovery Using a Distributed and Scalable Data Structure (http://www.freepatentsonline.com/6122754.html)*.

Research program:

[103] T.Risch: *IEIS - A Proposal for a Research Program on Integrated Engineering Information Systems*, in *http://user.it.uu.se/~torer/publ/ieis.pdf*, 1998. Evaluated by P.Lockemann, G.Wiederhold, E.Westkämper, M.Lindeblad*: Joint Evaluation Report on Integrated Engineering Information Systems (IEIS),* in *http://user.it.uu.se/~torer/evaluations/ieis_utv99.pdf*, March 16, 1999.

National Research Evaluation:

[104] T.Risch, S.Hägglund, D.Keyes, K.Lyytinen, C.Rolland, A.Salomaa, W.Shaufelberger, O.Solgaard, and A.Svensson: *Research in Information and Communication Technology in Norwegian Universities and Colleges – A review*, The Research Counsil of Norway, ISBN 82-12-01771-9, *http://user.it.uu.se/~torer/evaluations/ikt02Report_v19.pdf*, September 2002

PhD Thesis:

[105] T.Risch: *Compilation of Multiple File Queries in a Meta-Database System*, Linköping University, Linköping, Sweden, 1978.

Research Reports:

[106]Timour Katchaounov, Tore Risch: *Interface capabilities for query processing in peer mediator systems*, Technical report 2003-048, Department of Information Technology, Uppsala University, 2003.

[107]T.Katchanouov, V.Josifovski, and T.Risch: *Distributed View Expansion in Composable Mediators*, Technical Report 2000:2, Dept. Information Science, Uppsala University, Sweden, 2000.

[108]E.Toller and T.Risch: *An Object-Relational Model for Musical Data*, Technical Report 2000:3, Dept. Information Science, Uppsala University, Sweden, 2000

[109]Tore Risch, Vanja Josifovski, and Timour Katchaounov: *AMOS II Concepts*, Uppsala Database Laboratory, 2000.

[110]Staffan Flodin, Vanja Josifovski, Timour Katchaounov, Tore Risch, Martin Sköld, and Magnus Werner: *Amos II User's Manual*, Uppsala Database Laboratory, 2000..

[111]P-O. Fjällström, G.Neider, M.Persson, T.Risch, and P.Svensson: *Arkitekturprinciper för informationsöverlägsenhet i framtidens ledningsstödsystem*, Research Report, FOA-R--00-01435-505--SE, Feb. 2000, ISSN 1104-9154

[112]D.Elin and T.Risch: *Amos II Java Interfaces*, Uppsala Database Laboratory, 2000., *http://user.it.uu.se/~torer/publ/javaapi.pdf*.

[113] T.Risch: *Amos II External Interfaces*, Uppsala Database Laboratory, 2000, *http://user.it.uu.se/~torer/publ/external.pdf*.

[114] T.Risch: *ALisp User's Guide*, Uppsala Database Laboratory, 2000, http://user.it.uu.se/~torer/publ/alisp.pdf.

[115]V.Josifovski and T.Risch: Comparison of Amos II with other Data Integration Projects, Technical Report, EDSLAB/IDA, Linköping University, 1999, *http://user.it.uu..se/~udbl/amosII_comp.pdf*

[116]W.Litwin, J.Menon, T.Risch, and T.Schwarz*: Design Issues for Scalable Availability Schemes with Record Grouping*, IBM Research Report RJ10162, 1999.

[117]W.Litwin, J.Menon, and T.Risch: *LH* Schemes with Scalable Availability*, IBM Research Report RJ10121 (91937), 1998.

[118]W.Litwin and T.Risch: LH*g: *A High-availability Scalable Distributed Data Structure through Record Grouping*, Dept. of Computer Science, Paris Dauphine Univ., 1997.

[119]L. Lin and T. Risch: *Indexing Interpolated Time Sequences.* Technical Report LiTH-IDA-R-96-03, Department of Computer and Information Science, Linköping University, ISSN-0281-4250, Jan., 1996.

[120]J.S.Karlsson, S.Larsson, K.Orsborn, T.Risch, M.Sköld, and M.Werner: *AMOS.v1 User's Guide*, CAELAB Memo 94-01, Department of Computer and Information Science, Linköping University, Sweden, March 1994, *http://user.it.uu.se/~udbl/publ/amos94.pdf*

[121]K. Orsborn, T. Risch, and B. Torstenfelt: Produktmodellering med objektorienterade databaser och frågespråk. In *Proc. Workshop on Product Models (PM-93)*, Local conf. in Linköping, 26-27 October, 1993. Published in PM-93, ISBN 91-7871-212-2, Linköping 1993.

[122]W.Litwin, M.Ketabchi, and T. Risch: *Relations with Inherited Attributes,* HPL-92-45, Hewlett-Packard Laboratories, 1501 Page Mill Rd., Palo Alto, CA 94303, May 07, 1992

[123]T.Risch: *The Translation of Object-Oriented Queries to Optimized Datalog Programs,* HPL-DTD-91-9, Hewlett-Packard Laboratories, 1501 Page Mill Rd., Palo Alto, CA 94303.

[124]T.Risch: *Tuning the Reactivity of Database Monitors,* HPL-90-17, Hewlett-Packard Laboratories, 1501 Page Mill Rd., Palo Alto, CA 94303, (Also in Stanford Research Report STAN-CS-90-1301), 1990.

[125] Gio Wiederhold, Tore Risch, Peter Rathmann, Linda DeMichiel, Surajit Chaudhuri, Byung Suk Lee, Kincho Law, Thierry Barsalou, and Dallan Quass: *A Mediator Architecture for Abstract Data Access*, Technical report STAN-CS-90-1303, Department of Computer Science, Stanford University, Palo Alto, CA, February 1990.

[126]T.Risch: *Monitoring Database Objects*, HPL-DTD-88-7, Hewlett-Packard Laboratories, 1501 Page Mill Rd., Palo Alto, CA 94303, August 1988.

[127]T.Risch: *A Data Base Extension of Prolog and its Implementation,* UPMAIL, Dept. of Computer Science, Uppsala University, Sweden, 1982.

[128]T.Risch: *An interactive report generator language for a relational data base system allowing user defined aggregation operators*, UPMAIL, Dept. of Computer Science, Uppsala University, March 1982.

[129]T.Risch: *An Interpreter for Functional Rules*, IBM Research Report RJ3360 (40316), 1982.

[130]T.Risch: *Using Dynamic Generic Functions in Lisp like Languages*, IBM Research Report RJ3355 (40311), 1981.

[131]T.Risch, H.Stefansson, and B.Thide: *PLOT, ett datorprogram för kurvritning*, Report no. 17, Institute of Theoretical Physics, Uppsala University, 1979.

[132]T.Risch: *Optimizing non-procedural multiple file queries*, DLU79/1, Dept. of Computer Science, Uppsala, Sweden 1979.

[133]T.Risch*: LIDAM - Lisp Data Manager, Short Presentation*, DLU77/2, Dept. of Computer Science, Uppsala, Sweden, 1977.

[134] K.Mäkilä and T.Risch*: PL-360-Lisp - A Lisp 1.5 Interpreter written in PL/360*, C10041-M3(E5), Research Institute of National Defense (FOA), Stockholm, Sweden, 1975.

[135]J.Palme and T.Risch: *Index för production av stickordsindex* (eng. trans: *INDEX – to produce word indices*), C10020-M3(E5), Research Institute of National Defense (FOA), Stockholm, Sweden, 1975.

[136]T.Risch: *PMG - A Program Manipulator Generator*, DLU75/8, Dept. of Computer Science, Uppsala, Sweden, 1975.

[137]T.Risch: *REMREC - A Program for Automatic Recursion Removal*, DLU73/24, Dept. of Computer Science, Uppsala University, Sweden, 1973

CONFERENCE KEYNOTE PRESENTATION

Data Challenges That Produce Database Research, Joint EDBT/ICDT Ph.D. Workshop 2011 Uppsala, Sweden, March 25, 2011

CONFERENCE LEADERSHIP

General Chair for the *EDBT/ICDT 2011 Joint Conference*, Uppsala, Sweden, March 21-25, 2011 (*http://edbticdt2011.it.uu.se/*).

Keynote speaker at Joint EDBT/ICDT Ph.D. Workshop 2011, Uppsala, Sweden, March 25, 2011.

General Chair for the *6th IEEE International Workshop on Research Issues in Data Engineering: Interoperability of Nontraditional Database Systems (RIDE-NDS '96)* in New Orleans, Louisiana, Feb. 26-27, 1996.

General Chair and organizer of *The International Conference on Applications of Databases (ADB-94)* in Vadstena Monastery Hotel, Sweden, June 21-23, 1994. It was a great international success that attracted researchers from 15 countries (see http://www.ida.liu.se/labs/edslab/adb94/adb94.html).

General Chair and organizer of industrial workshop on *Modern Database Implementation Techniques* in Linköping, June 1-2, 1993. Speakers from Linköping, Trondheim and Paris participated.

Demonstration Chair at the *29th Intl. Conf. on Very Large Databases, VLDB2003,* Berlin, Germany, 2003

Panel Chair at 31st *Intl. Conf. on Very Large Databases, VLDB2005,* Trondheim, Norway.

Program Committee Chair at *First International Workshop on Database Interoperability*, April 19, 2005 - Namur, Belgium

Demonstration Char at 32nd *Intl. Conf. on Very Large Databases, VLDB2006,* Seoul, Korea

PROFESSIONAL ASSOCIATIONS:

IFIP Working Group 2.6 on Databases
ACM (Senior Member)
 IEEE (Senior Member)

RESEARCH REVIEWS

I have reviews research proposals for:
NSF (USA),
The Research Council of Norway,
Danish Technical Research Council,
Science Foundation Ireland (SFI),
Swiss National Science Foundation,
Netherlands Organisation for Scientific Research (NOW),
The Science Foundation Ireland (SFI),
TFR (Sweden),
NUTEK (Sweden),
KK-Stiftelsen (Sweden).

I was chairman of the international review board of the Distributed Information Systems programmee for the Norwegian Research Council, 1999.

I was chairman of the international review board of research in Information and Communication Technology at Norwegian universities 2002.

Reviewed proposal for research framework on *Intelligent Sound - Search and Retrieval in Dynamic Sound Databases* for Danish Technical Research Council, 2004

Reviewed proposal for Centres for Science, Engineering & Technology (CSET) programme for Science Foundation Ireland: *CLARITY: Bringing Information to Life*,(University College Dublin, UCD, 2007).

I am elected member of the Editorial Board of the scientific journal *VLDB Journal* (Springer).

Editor for the major area *Query languages (I.b)* in the forthcoming *Encyclopedia of Database Systems* (http://refworks.springer.com/database-systems/).

I have reviewed Journal and Conference articles for most major scientific database journals and conferences. This includes the journals
ACM Transactions of Database System,
IEEE Transactions of Knowledge and Data Engineering
Journal of Intelligent Information Systems
Data and Knowledge Engineering Journal
Software Practice and Experience
VLDB Journal
The Computer Journal
Information Systems
International Journal of Computer Systems Science and Engineering,
Journal of Systems Architecture
International Journal of Pervasive Computing and Communications
Distributed and Parallel Databases.

I was/am on the Program Committees for these conferences:
EDBT-94 (3rd Intl. Conf. on Extending Database Technology)
COMAD 1994 (6th Intl. Conf. on Management of Data)
ARTDB-95 (1st Intl. Workshop on Active and Real-Time Database Systems)
VLDB'95 (21st Intl. Conf. on Very Large Databases)
RIDS-95 (2nd Intl. Workshop on Rules in Database Systems)
8SSDBM (8th Intl. Conference on Scientific and Statistical Database Management)
ICECCS'96 (2nd IEEE Intl. Conference on the Engineering of Complex Computer Systems)
DKSME'96 (5th Intl. Conf. on Data and Knowledge Systems for Manufacturing and Engineering)
CIKM'96 (5th Intl. Conf. on Information and Knowledge Management)
ICDE'97 (13th Intl. Conf. on Data Engineering)
VLDB'97 (23rd Intl. Conf. on Very Large Databases)
RIDS-97 (3rd Intl. Workshop on Rules in Database Systems)
ARTDB-97 (2nd Intl. Workshop on Active, Real-Time and Temporal Database Systems)
VLDB'98 (24th Intl. Conf. on Very Large Databases)
ADBIS'98 (2nd East-European Symposium on Advances in Databases and Information Systems)
ADBIS'99 (3rd East-European Symposium on Advances in Databases and Information Systems)
CoopIS'99 (4th IFCIS Conference on Cooperative Information System)
VLDB2000 (26th Intl. Conf. on Very Large Databases)
EDBT2000 (7th Intl. Conf. on Extending Database Technology)
CoopIS'00 (5th IFICS Conf. on Cooperative Information Systems)
CIKM2000 (10th Intl. Conf. on Information and Knowledge Management)
2nd ECOOP Workshop on Object-Oriented Databases
ICDE2001 (17th IEEE CS International Conference on Data Engineering)
ICECCS2001 (7th IEEE International Conference on Engineering of Complex Computer Systems)
CIKM2001 (11th Intl. Conf. on Information and Knowledge Management)
EDBT Ph.D. Workshop 2002
WDAS2002 (Workshop on Distributed Data & Structures)
VLDB2002 (28th Intl. Conf. on Very Large Databases)
IDEAS'02 (2002 International Database Engineering and Applications Symposium)
CoopIS2002 (10th International Conference on Cooperative Information Systems)
ECOOP2002 (16th European Conference on Object-Oriented Programming)
SIGMOD2003 (ACM SIGMOD Conference),
DASFAA'03 (Database Systems for Advanced Applications),
IDEAS'03 (2003 International Database Engineering and Applications Symposium)
WDAS2003 (Workshop on Distributed Data & Structures)
CoopIS2003 (11th International Conference on Cooperative Information Systems)
EDBT2004 (9th Intl. Conf. on Extending Database Technology)
CoopIS2004 (12th Intl. Conf. on Cooperative Information Systems)
VLDB2003 (29th Intl. Conf. on Very Large Databases), Demo Chair
IDEAS'04 (2004 Intl. Database Engineering and Applications Symposium)
WDAS2004 (Workshop on Distributed Data & Structures)
VLDB2004 (30th Intl. Conf. on Very Large Databases)
COMAD 2005 (Intl. Conf. on Management of Data)
CIC 2005 (6th Intl. Conf. on Communications in Computing)
CoopIS2005 (13th International Conference on Cooperative Information Systems)
IDEAS2005 (9th International Database Engineering and Applications Symposium)
SME'05 (1st Workshop on Semantics in Mobile Environments)
WebS2005 (4th International Workshop on Web Semantics)
InterDB2006 (2nd International Workshop on Database Interoperability), PC co-chair
DASFAA2006 (Database Systems for Advanced Applications)
ICDE2006 (22nd Intl. Conf. on Data Engineering)
EDBT2006 (10th International Conference on Extending Database Technology)
ICDCS2006 (26th International Conference on Distributed Computing Systems)
ADBIS2006 (10th East-European Conference on Advances in Databases and Information Systems)
MSIME2006(Workshop on Managing Context Information and Semantics in Mobile Environments)
MoSO2006 (Workshop on Mobile Services and Ontologies)
VLDB2006 (32nd International Conference on Very Large Data Bases), Demo. Chair.

IDEAS2006 (10th International Database Engineering & Applications Symposium)
WebS2006 (5th International Workshop on Web Semantics)
ICDE2007 (23rd International Conference on Data Engineering), Area Chair
DASFAA2007, (12th International Conference on Database Systems for Advanced Applications)
DMUC2007 (1st International Workshop on Data Management in Ubiquitous Computing)
SIGMOD2007 (26th ACM international conference on management of data)
IDEAS2007 (11th International Database Engineering & Applications Symposium)
EDAPS2007 (Workshop on Event-Driven Architectures Processing and Systems)
InterDB2007 (3rd International Workshop on Database Interoperability)
MOSO2007 (Workshop on Mobile Services-oriented Architectures and Ontologies)
MSIMSE2007 (Second International Workshop on Managing Context Information and Semantics in Mobile Environments)
WAIM2007 (9th Asia-Pacific Web Conference and the 8th International Conference on Web-Age Information Management)
WEBS2007 (6th International Workshop on Web Semantics)
ADBIS2008 (12th East-European Conference on Advances in Databases and Information Systems)
DASFAA2008 (13th International Conference on Database Systems for Advanced Applications)
ICDE2008 (24th International Conference on Data Engineering)
EDBT2008 (11th International Conference on Extending Database Technology)
ER2008 (27th International Conference on Conceptual Modeling)
IDEAS2008 (12th International Database Engineering & Applications Symposium)
SIGMOD2008 (27th ACM international conference on management of data)
WEBS2008 (7th International Workshop on Web Semantics)
WISE2008 (7th International Conference on Web Information Systems Engieering)
EDBT2009 (12th International Conference on Extending Database Technology)
SIGMOD2009 (28th ACM international conference on management of data)
EDBT2010 (13th International Conference on Extending Database Technology)
ICOODB2010 (3rd International Conference on Objects and Databases)
SSDBM2010 (22nd International Conference on Scientific and Statistical Database Management)
VLDB2010 (36th International Conference on Very Large Data Bases)
iiWAS2011 (13th International Conference on Information Integration and Web-based Applications & Services
WEBS2011 (10th International Workshop on Web Semantics)
EDBT2012 (15th International Conference on Extending Database Technology)
SSDBM2012 (24th International Conference on scientific and statistical database management)

On review committee for Professorship in CS (Datateknikk og Telematikk, fagområde Operativsystemer) in Trondheim, Norway 1997.

On review committee for Professorship in CS (Stora Datasystem) in Oslo, Norway 1999.

On review committee for Professorship in Distributed Systems and Real-time Systems, Skövde University, Sweden, 2000.

On review committee for Professorship in CS (Distribuerte datasystemer) in Trondheim, Norway, 2001.

On review committee for Professorship in CS (Drift av datasystemer og -nett) in Trondheim, Norway, 2001.

On review committee for Assistant Professorship (Lektor) in Computer Science, in Skövde, Sweden, 2003

On review committee for Assistant Professorship (Lektor) at KTH, Sweden, 2003

On review committee for Adjunct Professorship in Computer Science at Santa Cruz University, USA, 2004.

On review committee for Professorhip in Distibuted and Parallel systems, Tormsö, Norway, 2004.
On review committee for Associate professorships in Computer Science, Aalborg University, Denmark, 2007

On Abilitation committee for Assistant Professor Lars Frank, Copenhagen Business School, Denmark, 2007-2008

RESEARCH PROGRAM

Developed new research program on Integrated Engineering Information Systems (IEIS) for SSF, 1997-1998.

THESIS SUPERVISION

Main supervisor ('huvudhandledare') for Ph.D. degrees:
   1. Kjell Orsborn*: On Extensible and Object-Relational Database Technology for Finite Element Analysis Applications*, Dissertation No 452, 1996, Linköping University.
   2. Olof Johansson*: Development Environments for Complex Product Models,* Dissertation No 459, 1996, Linköping University.
   3. Martin Sköld: *Active Database Management Systems for Monitoring and Control*, Dissertation No 494, 1997, Linköping University.
   4. Mikael Ronström: *Design and Modeling of a Parallel Data Server for Telecom Applications*, Dissertation No 520, 1998, Linköping University.
   5. Ling Lin: *Management of 1-D Sequence Data – From Discrete to Continuous*, Dissertation No. 561, 1999, Linköping University.
   6. Vanja Josifovski: *Design, Implementation and Evaluation of a Distributed Mediator System for Data Integration*, Dissertation No. 582, 1999, Linköping University.
   7. Henrik André´-Jönsson: *Indexing Strategies for Time Series Data*, Dissertation No. 757, 2002, Linköping University.
   8. Timour Katchaounov: *Query Processing for Peer Mediator Databases*, Doctoral Thesis, Comprehensive Summaries of Uppsala Dissertations from the Faculty of Science and Technology, No. 901, ISSN 1104-232X, 2003.
   9. Milena Ivanova: *Scalable Scientific Stream Query Processing*, Uppsala Dissertations from the Faculty of Science and Technology, No 66, ISBN: 91-554-6351-7, 2005.
   10. Johan Petrini: *Querying RDF Schema Views of Relational Databases,* Uppsala Dissertations from the Faculty of Science and Technology, No. 75, ISBN 978-91-554-7202-3, 2008.
   11. Ruslan Fomkin: *Optimization and Execution of Complex Scientific Queries*, Uppsala Dissertations from the Faculty of Science and Technology, No. 80, ISBN 978-91-554-7382-2, 2009.
   12. Manivasakan Sabesan: *Querying Data Providing Web Services,* Uppsala Dissertations from the Faculty of Science and Technology 755, ISBN 978-91-554-7852-0, 2010.
   13. Erik Zeitler: *Scalable Parallelization of Expensive Continuous Queries over Massive Data Streams*, Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Science and Technology 836 ISSN 1651-6214, ISBN 978-91-554-8095-0.

Supervised ('huvudhandledare') Licentiate degrees for:
Gustav Fahl: *Object Views of Relational Data in Multidatabase Systems*, Linköping Licentiate Thesis No 446, 1995.
Martin Sköld: *Active Rules based on Object-Relational Queries*, Linköping Licentiate Thesis No 452, 1995.
Staffan Flodin: *Efficient Management of Object-Oriented Queries with Late Bound Functions*, Linköping Licentiate Thesis No 538, 1996.
Magnus Werner: *Multidatabase Integration using Polymorphic Queries and Views*, Linköping Licentiate Thesis No 546, 1996.
Ling Lin: *A Value-based Indexing Technique For Time Sequences*, Linköping Licentiate Thesis No 597, 1997.

Jonas Karlsson: *A Scalable Data Structure for a Parallel Data Server*, Linköping Licentiate Thesis No 609, 1997.
Thomas Padron-McCarthy: *Performance-Polymorphic Declarative Queries*, Linköping Licentiate Thesis No 733, 1998.
Henrik Andre'-Jönsson: *Indexing time-series data using text indexing methods*, Linköping Thesis No 723, 1999.
Manivasakan Sabesan: Qerying Mediated Web Services, Uppsala Licentiate Thesis, ISSN 1404-5117, 2007.

Supervised 29 M.Sc Theses ('xjobb') in Linköping 1992-1999 and more than 20 in Uppsala.

THESIS COMMITTEES

Opponent to:
Erland Jungert, Linköping University. Supervisor: Erik Sandewall.
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Fethi Bennour Dit Sahli, Dauphine University, Supervisor: Witold Litwin
Rim Moussa, Dauphine University, Supervisor: Witold Litwin
Jonas S. Karlsson, Amsterdam University. Supervisor: Martin Kersten
Niels Nes, Amsterdam University. Supervisor: Martin Kersten
Matts Ahlsen, (Licentiate) Stockholm University. Supervisor: Janis Bubenko.
Morgan Ericsson (Licentiate) Växjö University, Supervisor: Welf Loeve
Norun Sanderson, Oslo University, Supervisor: Thomas Plageman

On PhD thesis committees ('betygsnämnd') for:
Keith Hall, Stanford University. Supervisor: Gio Wiederhold.
Ying Zhang, Stockholm University. Supervisor: Terttu Orci.
Magnus Boman, Stockholm University. Supervisor: Jans Bubenko.
Kristian Sanddahl, Linköping University. Supervisor: Sture Hägglund.
Mikael Pettersson, Linköping University. Supervisor: Peter Fritzsson.
Johan Ringström. Linköping University. Supervisor: Peter Fritzsson.
Thieme Voigt, Uppsala University, Supervisor: Per Gunningberg
Ammi Ericsson, Skövde University College, Supervisor: Mikael Berndtsson
Merja Karjalainen, Chalmers University, Supervisor: Graham Kemp

INVITED INTERNATIONAL CONFERENCE PANELS

Knowledge to Mediate from User's Workstations to Databases, at The 15th Intl. Conf. on Very Large Databases, Amsterdam, Holland, 1989.

The Future of Active Database Systems: SQL Triggers, Knowledge-Based Rule Processing, and Beyond, at The 11th Intl. Conf. on Data Engineering, Taipei, Taiwan, 1995.

INVITED INTERNATIONAL SEMINARS

Distributed Query Decomposition in Amos II
Dauphine University, Paris, France, June 19, 2002
IFIP WG 2.6 in Lausanne, Switzerland, May 15-16, 2002

Evaluation of Join Strategies for Distributed Mediation
Dauphine University, Paris, Sept. 10, 2001

Optimizing Overlapping Object-Oriented Mediator Queries

IFIP WG 2.6 in San Sebastian, Spain, October 8-10, 2001

Database Technology for the Internet Age
InternetBay conference on Science and Cyber Community, Luleå, Sweden, 2001.

A Object-Oriented Multi-Mediator Browser
IFIP WG 2.6 in Darmstadt, November 27-29, 2000.

Functional Queries to OO Views for Data Mediation
IFIP WG 2.6 in Rotorua, New Zealand, (Jan 9-19, 1999),
Univ. Dauphine Paris 9, France (May 31, 1999).

Processing of Object-Oriented Queries and Views in a Mediator Database System
Berkeley University, USA (Nov. 6, 1997).

Optimizing Queries to Translated Objects:
IFIP WG 2.6 in Konstanz, Germany (June 2-4, 1997).

The processing of Object-Oriented Queries in a customizable DBMS:
Univ. Dauphine Paris 9, France (Jan 31, 1996),
Dagstuhl Workshop on Performance Enhancement in Object Bases at Schloss Dagstuhl, Germany
(Apr. 2, 1996),
Kings College in Aberdeen, Scotland (May 17, 1996),
IFIP WG 2.6 in Rockville, VA (Nov. 7, 1996),
George Mason Univ. in Fairfax, VA (Nov. 11, 1996),
IBM Almaden Research Center, USA (Nov. 18, 1996).

The processing of Object-Oriented Queries and Rules in AMOS:
 Univ. of Linz in Austria (Apr. 26, 1995),
Georgia Tech. in Atlanta, GA (Feb. 20, 1996),
Univ. of Florida in Gainesville, FL (Feb. 22, 1996),
MCC in Austin, TX (Mar. 5, 1996).

Monitoring Database Objects:
 Bay Area System Seminar, BASS-19,
IBM Almaden Research Center (Oct 20, 1989),
Stanford Database Research Seminar (Oct. 13, 1989)

Syntel - A Functional Approach to Integrating Database and Expert Systems:
 Stanford Database Research Seminar (April 11, 1988).

Knowledge Programming using Functional Representations:
 HP Labs Computer Colloquium, Palo Alto (Jan. 22, 1987).

CONSULTING

Consulted for Ericsson Inc. in development of relational database system, 1983.
SYBASE Inc., Emeryville, California, Nov. 1993.
Expert witness on Database Technology at Stockholm Court, 1996.
Consulted for Ericsson Inc. in development of parallel main memory relational DBMS, 2000.