Aleksander Øhrn

Curriculum Vitae

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Personalia

Date of birth:	April 21, 1970
Address:	Sverrestien 23, NO-1365, Blommenholm, Norway
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Marital status:	Married, two children
Nationality:	Norwegian and American

Education

1996–2000:	PhD in Computer Science, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. GPA 1.2.
1989–1993:	MSc in Computer Science, Department of Computer Systems and Telematics, Norwegian Institute of Technology (NTH), Trondheim, Norway. GPA 1.5.
1986–1989:	Persbråten Videregående Skole, Oslo, Norway. GPA 5.5.

Professional Experience

2005–:	Chief scientist, Fast Search & Transfer ASA.
2000–2005:	Senior research scientist, Fast Search & Transfer ASA. Research and development related to search engine technology, advanced information retrieval and computational linguistics.
1996–2000:	Research fellow, Knowledge Systems Group, Department of Computer and Information Science, NTNU. Research in data mining, approximate reasoning and medical informatics. Developed ROSETTA, a data mining tool based on rough set theory.
1997–2000:	Teaching assistant, Department of Computer and Information Science, NTNU. Responsible for courses in Programming Languages, Logic Programming, and Logic.
1998:	Visiting scholar, Decision Systems Group, Brigham and Women's Hospital, Department of Radiology, Harvard Medical School, Boston, MA, USA. Research in medical informatics.
1995:	Systems developer, Geomatic A/S. Developed algorithms and software for visualization, gridding, faulting and mathematical modelling of petroleum reservoirs.
1994:	Systems developer, Headquarters Defense Command Norway, Naval Staff. Maintained and wrote database applications for the Norwegian Navy.
1990-1993:	Summer intern, Department of Optical Measurement Systems and Data Analysis, SINTEF SI. Developed software for nonlinear empirical modelling and ran simulations with data from various industrial processes.
1991-1993:	Subeditor and music journalist, Studentradio'n i Trondheim. Responsible for most internal and administrative matters.
1991-1993:	Teaching assistant, Department of Computer Systems and Telematics, NTH. Involved with courses in Programming, and Algorithms and Data Structures.

Awards and Grants

2002:	Winner of Trond Lykke's Award for Young Researchers, awarded by The Royal Norwegian Society of Sciences and Letters for excellence in research within the natural sciences.
2000:	PhD thesis nominated to the ECCAI Artificial Intelligence Dissertation Award, awarded by the European Coordinating Committee for Artificial Intelligence to the best European dissertation within the field of artificial intelligence.
2000:	PhD thesis selected best applied science dissertation from the Faculty of Physics, Mathematics and Informatics, NTNU.
1998:	Research and travel grants from Norges tekniske høgskoles fond, Det Norske Veritas, Department of Computer and Information Science at NTNU, and Generaldirektør Rolf Østbyes stipendiefond.
1996:	Individual PhD scholarship grant from The Norwegian Research Council.

Scientific Publications

Theses

A. Øhrn (1999), *"Discernibility and Rough Sets in Medicine: Tools and Applications"*, PhD thesis, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. NTNU report 1999:133, ISBN 82-7984-014-1. 239 pages.

A. Øhrn (1993), *"Fast Learning Methods for Artificial Neural Networks"*, MSc thesis, Department of Computer Systems and Telematics, Norwegian Institute of Technology (NTH), Trondheim, Norway. 70 pages.

Journal Articles

S. Vinterbo, A. Øhrn (2000), *"Minimal Approximate Hitting Sets and Rule Templates"*, International Journal of Approximate Reasoning, vol. 25, no. 2, pp. 123–143.

A. Øhrn, T. Rowland (2000), *"Rough Sets: A Knowledge Discovery Technique for Multifactorial Medical Outcomes"*, American Journal of Physical Medicine & Rehabilitation, vol. 79, no. 1. pp. 100–108.

A. Øhrn, L. Ohno-Machado (1999), *"Using Boolean Reasoning to Anonymize Databases"*, Artificial Intelligence in Medicine, vol. 15, no. 3, pp. 235–254.

J. Komorowski, A. Øhrn (1999), *"Modelling Prognostic Power of Cardiac Tests Using Rough Sets"*, Artificial Intelligence in Medicine, vol. 15, no. 2, pp. 167–191.

Book Contributions

J. Komorowski, A. Øhrn, A. Skowron (2002), *"The ROSETTA Rough Set Software System"*, In *Handbook of Data Mining and Knowledge Discovery*, W. Klösgen and J. Żytkow (eds.), ch. D.2.3, Oxford University Press. ISBN 0-19-511831-6.

A. Øhrn, J. Komorowski, A. Skowron, P. Synak (1998), *"The Design and Implementation of a Knowledge Discovery Toolkit Based on Rough Sets: The ROSETTA System"*, In *Rough Sets in Knowledge Discovery 1: Methodology and Applications*, L. Polkowski and A. Skowron (eds.), Studies in Fuzziness and Soft Computing, vol. 18, ch. 19, pp. 376–399, Physica-Verlag. ISBN 3-7908-1119-X.

A. Øhrn, J. Komorowski, A. Skowron, P. Synak (1998), *"The ROSETTA Software System"*, In *Rough Sets in Knowledge Discovery 2: Applications, Case Studies and Software Systems*, L. Polkowski and A. Skowron (eds.), Studies in Fuzziness and Soft Computing, vol. 19, pp. 572–576, Physica-Verlag. ISBN 3-7908-1120-3.

Conference Papers

W. A. Arentz, A. Øhrn (2004), *"Multidimensional Visualization and Navigation in Search Results"*, Proc. Eighth International Conference on Knowledge-Based Intelligent Information and Engineering Systems (KES'2004), Wellington, New Zealand, pp. 620–627.

A. Øhrn, J. Komorowski (1999), *"Diagnosing Acute Appendictis with Very Simple Classification Rules"*, Proc. Norsk Informatikkonferanse (NIK'99), Trondheim, Norway, November 15–17, pp. 105–116, Tapir.

L. Ohno-Machado, S. Vinterbo, A. Øhrn, S. Dreiseitl (1999), *"Clinical Data Processing Tools: A Machine Learning Resource"*, Proc. AMIA Annual Symposium, Washington DC, USA, November 6–10, pp. 1132.

A. Øhrn, J. Komorowski (1999), *"Diagnosing Acute Appendicitis with Very Simple Classification Rules"*, Proc. Third European Symposium on Principles and Practice of Knowledge Discovery in Databases (PKDD'99), Prague, Czech Republic, September 15–18, Lecture Notes in Artificial Intelligence, vol. 1704, pp. 462–467, Springer-Verlag.

T. Ågotnes, J. Komorowski, A. Øhrn (1999), *"Finding High Performance Subsets of Induced Rule Sets: Extended Summary"*, Proc. Seventh European Congress on Intelligent Techniques and Soft Computing (EUFIT'99), Aachen, Germany, September 13–16. 7 pages.

A. Øhrn, L. Ohno-Machado, T. Rowland (1998), *"Building Manageable Rough Set Classifiers"*, Proc. AMIA Annual Symposium, Orlando, FL, USA, November 7–11, pp. 543–547.

L. Ohno-Machado, H. S. Fraser, A. Øhrn (1998), *"Improving Machine Learning Performance by Removing Redundant Cases in Medical Data Sets"*, Proc. AMIA Annual Symposium, Orlando, FL, USA, November 7–11, pp. 523–527.

T. Rowland, L. Ohno-Machado, A. Øhrn (1998), *"Comparison of Multiple Prediction Models for Ambulation Following Spinal Cord Injury"*, Proc. AMIA Annual Symposium, Orlando, FL, USA, November 7–11, pp. 528–532.

U. Carlin, J. Komorowski, A. Øhrn (1998), *"Rough Set Analysis of Medical Datasets in a Case of Patients with Suspected Acute Appendicitis"*, Proc. ECAI'98 Workshop on Intelligent Data Analysis in Medicine and Pharmacology (IDAMAP'98), pp. 18–28.

U. Carlin, J. Komorowski, A. Øhrn (1998), *"Rough Set Analysis of Patients with Suspected Acute Appendicitis"*, Proc. Seventh Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU'98), Paris, France, July 6–10, pp. 1528–1533.

T.-K. Jenssen, J. Komorowski, A. Øhrn (1998), *"Some Heuristics for Default Knowledge Discovery"*, Proc. Norsk Informatikkonferanse (NIK'98), Kristiansand, Norway, November 23–25, pp. 293–299, Tapir.

T.-K. Jenssen, J. Komorowski, A. Øhrn (1998), *"Some Heuristics for Default Knowledge Discovery"*, Proc. First International Conference on Rough Sets and Current Trends in Computing (RSCTC'98), Warsaw, Poland, June 22–26, Lecture Notes in Artificial Intelligence, vol. 1424, pp. 373–380, Springer-Verlag.

A. Øhrn, J. Komorowski (1998), *"Analyzing The Prognostic Power of Cardiac Tests Using Rough Sets"*, Working Notes of the Invited Session on Intelligent Prognostic Methods in Medical Diagnosis and Treatment Planning, Second IMACS Multiconference on Computational Engineering in Systems Applications (CESA'98), Nabeul-Hammamet, Tunisia, April 1–4, pp. 54–61.

A. Øhrn, S. Vinterbo, P. Szymański, J. Komorowski (1997), *"Modelling Cardiac Patient Set Residuals Using Rough Sets"*, Proc. AMIA Annual Fall Symposium (formerly SCAMC), Nashville, TN, USA, October 25–29, pp. 203–207.

A. Øhrn, J. Komorowski (1997), *"ROSETTA: A Rough Set Toolkit for Analysis of Data"*, Proc. Third International Joint Conference on Information Sciences, Fifth International Workshop on Rough Sets and Soft Computing (RSSC'97), Durham, NC, USA, March 1–5, vol. 3, pp. 403-407.

S. Vinterbo, A. Øhrn (1997), *"A Rough Set Approach to Clustering"*, Proc. Third International Joint Conference on Information Sciences, Fifth International Workshop on Rough Sets and Soft Computing (RSSC'97), Durham, NC, USA, March 1–5, vol. 3, pp. 383–386.

M. Carlin, T. Kavli, B. Lillekjendlie, A. Øhrn (1993), *"A Comparison of Four Methods for Nonlinear Data Modelling"*, Proc. Nordic Symposium on Neural Networks and Advanced Applications (NSANN'93), Bergen, Norway, October, pp. 26–40.

Miscellaneous

A. Øhrn (2004), *"Search Engines: What They Do and Where They're Going"*, Microsoft Research, Seattle, Washington, USA. Invited talk.

A. Øhrn (2003), *"Search Engines: What They Do and How They Work"*, Proc. Fourth Dutch-Belgian Information Retrieval Workshop (DIR'03), Amsterdam, The Netherlands, December 8–9, pp. 3–4. Keynote speaker.

A. Øhrn (2003), *"Live Analytics: Real-Time Analysis and Organization of Search Results"*, Seventh European Conference on Research and Advanced Technology for Digital Libraries (ECDL'03), Trondheim, Norway, August 17–22. Poster presentation.

A. Øhrn (2001), *"Logisk analyse av medisinske databaser: Verktøy og noen anvendelser"*, Tidsskrift for Den norske lægeforening, vol. 121, no. 1, pp. 84.

A. Øhrn (2000), *"Book Review: Knowledge Discovery and Data Mining"*, Artificial Intelligence in Medicine, vol. 20, no. 1, pp. 95–98.

A. Øhrn (2000), *"ROSETTA Technical Reference Manual"*, Knowledge Systems Group, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. 66 pages.

A. Øhrn (2000), *"The ROSETTA C++ Library: Overview of Files and Classes"*, Knowledge Systems Group, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. 45 pages.

S. Vinterbo, A. Øhrn (1999), *"Minimal Approximate Hitting Sets and Rule Templates"*, In *Predictive Models in Medicine: Some Methods for Construction and Adaptation*, S. Vinterbo, PhD thesis, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. NTNU report 1999:130, ISBN 82-7984-011-7. 23 pages.

A. Øhrn (1999), *"Cracking a Logical Puzzle with ROSETTA"*, Knowledge Systems Group, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. 6 pages.

T. Hvidsten, T.-K. Jenssen, A. Lægreid, A. Øhrn, D. Tjeldvoll, J. Komorowski (1999), *"Boolean Reasoning in the Analysis of Gene Expression Data"*, Data Mining for Bioinformatics: Towards In Silico Biology, Cambridge, UK, November 10–12. Poster presentation.

A. Øhrn (1999), *"Diagnosing Acute Appendicitis with Very Simple Classification Rules"*, Knowledge Systems Group, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. 13 pages.

A. Øhrn, L. Ohno-Machado (1998), *"Using Boolean Reasoning to Anonymize Databases"*, Knowledge Systems Group, Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Trondheim, Norway. 20 pages.

A. Øhrn, J. Komorowski, A. Skowron, P. Synak (1998), *"The ROSETTA Software System"*, Bulletin of the International Rough Set Society, vol. 2, no. 1, pp. 28–30.

A. Øhrn, J. Komorowski, A. Skowron, P. Synak (1997), *"A Software System for Rough Data Analysis"*, Bulletin of the International Rough Set Society, vol. 1, no. 2, pp. 58–59.

A. Øhrn (1993), *"Rough Logic Control"*, Knowledge Systems Group, Department of Computer Systems and Telematics, Norwegian Institute of Technology (NTH), Trondheim, Norway. 46 pages.