

Publications 2003 - present

Lena Strömbäck

Peer-reviewed journal contributions

Strömbäck, L, Ivanova V, Hall D (2012) Using statistical Information for Efficient Design and Evaluation of Hybrid XML Storage. *International Journal of Advances in Software* 4(3-4). Invited contribution.

Åsberg M, Strömbäck L (2010) Bioinformatics: From Disparate Web Services to Semantics and Interoperability. *International Journal of Advances in Software* 3(3-4). Invited contribution.

Strömbäck L, Hall D, Åsberg M, and Schmidt S (2009) Efficient XML data management for systems biology: Problems, tools and future vision. *International Journal of Advances in Software* 2(2-3):217-233, IARIA, <http://www.iariajournals.org/software/tocv2n23.html>, Invited contribution.

Strömbäck L, Hall D, and Lambrix P (2007) A review of standards for data exchange within systems biology. *Proteomics*, 7(6):857-867, 2007. Invited contribution. (Impact Factor 5.766.) Number of citations: 22

Strömbäck L, Jakoniene V, Tan H and Lambrix P (2006) Representing, storing and accessing molecular interaction data: a review of models and tools. *Briefings in Bioinformatics*, 7(4):331-338, 2006. Invited contribution. (Impact factor 4.627) Number of citations: 18

Strömbäck L and Lambrix P. (2005) 'Representations of molecular pathways: An evaluation of SBML, PSI MI and BioPAX', *Bioinformatics*, 21(24):4401-4407, 2005 (Impact Factor 6.701). Number of citations: 84

Peer-reviewed conference contributions:

Strömbäck, L, Hjerdt, N, Eriksson Bram, L, Lewaur P. (2013) Vattenweb: A transparent service to support decision makers in achieving improved water status. *Proceedings of ISESS 2013. IFIP Advances in Information and Communication Technology, Springer*

Strömbäck, L, Foster, K, and Rosberg, J (2013) Data and Provenance Management for Climate Effect Studies. Adaption of Climate Data with Distribution Based Scaling for Hydrological Simulations. *Proceedings of DBKDA 2013, Seville, Spain.*

Ivanova, V, Strömbäck, L (2011) Creating Infrastructure for Tool-Independent Querying and Exploration of Scientific Workflows. *E-Science 2011, Stockholm, Sweden.*

Strömbäck L, Ivanova V, Hall D (2011) Exploring Statistical Information for Applications-Specific Design and Evaluation of Hybrid XML storage. *Databases, Knowledge, and Data Applications DBKDA 2011, January 2011, St Maarten, The Netherlands.*

Åsberg, M, Strömbäck, L (2010) Interoperable and Easy-to-Use Web Services for the Bioinformatics Community - A Case Study. *The Second International Conference on Advances in Databases, Knowledge, and Data Applications, DBKDA 2010, April 2010, Menuires, France.*

- Hall, D, Strömbäck, L (2010) Generation of Synthetic XML for Evaluation of Hybrid XML Systems. *Proc. 2nd International Workshop on Benchmarking of Database Management Systems and Data-Oriented Web Technologies*. March 2010, Tsukuba Japan.
- Strömbäck, L, Schmidt, S (2009) An Extension of XQuery for Graph Analysis of Biological Pathways, *Proc. The First International Conference on Advances in Databases, Knowledge, and Data Applications, DBKDA 2009*, March 1-6, 2009, Cancun, Mexico, Best paper Award.
- Ellkvist, T, Lena Strömbäck, L, Didier Lins, L, and Freire J (2009) A First Study on Strategies for Generating Workflow Snippets. *The first International Workshop on Keyword Search ob structured data KEYS 2009, Collocated with ACM SIGMOD/PODS*, June 28th, 2009, Providence, Rhode Island, USA.
- Ellkvist, T, Koop, D, Freire, J, Silva, C T, and Strömbäck, L (2009) Using Mediation to Achieve Provenance Interoperability, *In IEEE International Workshop on Scientific Workflows*, 2009.
- Strömbäck, L, Åsberg, M, Hall, D (2009) HShreX: a Tool for Design and Evaluation of Hybrid XML Storage, *FLexDBIST 2009*, Linz Austria.
- Köhn D, Strömbäck L (2008) A method for Semi-automatic Standard Integration in Systems Biology, *Proc. 19th Intern. Conf. on Database and Expert Systems Applications*, pp 745 - 752, Turin, Italy, paper, DOI 10.1007/978-3-540-85654-2_66.
- Strömbäck, L Eifrem E, Faraglia P (2008) Customizable XML Management on a Navigational Database Framework', *Proc. 19th International Workshop on Database and Expert Systems Applications*, Turin, Italy pp 261 - 265, paper, DOI 10.1109/DEXA.2008.48.
- Ellqvist T, Freire J, Koop D, Silva C, Strömbäck L (2008) Using Mediation to Achieve Provenance Interoperability *Proc. 4th IEEE International Conference on e-Science*.
- Lambrix P, Strömbäck L, (2007) Teaching databases to hundreds of engineering students, *Proceedings of the 2nd Workshop on Computer Science Education*, 2007.
- Strömbäck, L. (2006) A classification for comparing standardized XML data. *Proc. 17th International Workshop on Database and Expert Systems Applications (DEXA'06)*, pp 517-521, Krakow, Poland, September 2006.
- Strömbäck, L, Hall, D. (2006) An evaluation of the Use of XML for Representation, Querying, and Analysis of Molecular Interactions. *In T. Grust et. al. (Editors) Current Trends in Database Technology - EDBT 2006 Workshops*. Springer verlag. (Acceptance rate 29%).
- Sauro H M, Uhrmacher A M, Harel D, Hucka M, Kwiatkowska M, Mendes P, Shaffer C A, Strömbäck L, Tyson J J. (2006) Challenges for Modeling and Simulation Methods in Systems Biology. *In: Track on Modeling and Simulation in Computational Biology at the Winter Simulation Conference 2006*.
- Strömbäck L (2006). A method for comparison of standardised XML information within systems biology. *In: Track on Modeling and Simulation in Computational Biology at the Winter Simulation Conference 2006*. Invited contribution.
- Köhn, D, Strömbäck, L. (2006) A Schema matching architecture for the bioinformatics domain. *In: Track on Modeling and Simulation in Computational Biology at the Winter Simulation Conference 2006*.
- Strömbäck L. (2005) Possibilities and Challenges Using XML Technology for Storage and Integration of Molecular Interactions. *Proc. 16th International Workshop on*

Database and Expert Systems Applications (DEXA'05), pp 575-579, Copenhagen, Denmark, August 2005.

Strömbäck L and Lambrix P. (2005) Modeling for simulation and data storage of cellular pathways: Similarities and differences, *Proceedings of the Fourth Modeling and Simulation in Biology, Medicine and Biomedical Engineering Conference - BioMedSim*, pp 65-72, May 26-27, Linköping, Sweden, 2005.

Strömbäck L. (2004) XML representations of pathway data: a comparison. In *Proceedings of the ACM SIGIR'04 Workshop on Search and Discovery in Bioinformatics* .

Turcan E, Strömbäck L, Morris J. (2003) Share it! by bringing P2P into the TV-domain. In *Proceedings of the Third IEEE International Conference on Peer-to-Peer Computing* Linköping, Sweden.

Review articles, book chapters and books:

Strömbäck, L. From Databases and Web Information Systems to Hydrology and Environmental Information Services. In: Lambrix P, *Advances in Secure and Networked Information Systems - The ADIT Perspective*, Festschrift in honor of professor Nahid Shahmehri, LiU Tryck / LiU Electronic Press, 2012. ISBN for printed version: 978-91-7519-717-3, ISBN for electronic version: 978-91-7519-716-6.

Lambrix P, Strömbäck L, Tan H, Information integration in bioinformatics with ontologies and standards, *chapter 8 in Semantic Techniques for the Web: The REWERSE perspective*, Springer, 2009.

Lambrix P, Tan H, Jakoniene V and Strömbäck L (2006) Biological Ontologies, chapter 4 in Baker, Cheung, (eds), *Semantic Web: Revolutionizing Knowledge Discovery in the Life Sciences*, pp 85-99, Springer, 2007. ISBN-10: 0-387-48436-1, ISBN-13: 978-0-387-48436-5.

Strömbäck, L. (2004) Så tycker kvinnor och män om våra utbildningar. I Anna Bjuremark (red). *Iscensättning av problematiken genus och mångfald i undervisningen vid LiU - några exempel från fördjupningskurser i högskolepedagogik. CUL-rapporter: Nr 9*, Linköpings universitet.

Magazines

Arheimer, B, Olsson J, Strömbäck, L (2013) Dissemination and End-User Interactions of Climate Change Impact in Water Resources. *Vatten*, tidskrift för vattenvård, Årgång 69, Nr 4. www.tidskriftenvatten.se

Strömbäck L, Freire J, (2011) XML Management for Bioinformatics Applications. *Computing in Science and Engineering (CiSE)*.

Lambrix P, Strömbäck L, (2007 and 2008) Where is my protein? - Issues in Information Integration, *BIOforum Europe*, 7-8/07:24-26. Invited contribution. Awarded and republished 2008 as one of 2007 highlights.

