

Lauri Lahti

- Doctor of Science (Technology), Aalto University School of Science, Department of Computer Science
- Master of Science, University of Helsinki, Department of Computer Science

- Tekniikan tohtori, Aalto-yliopiston perustieteiden korkeakoulu, tietotekniikan laitos
- Filosofian maisteri, Helsingin yliopisto, tietojenkäsittelytieteen laitos

Contact / Yhteydenotot: Lauri dot Lahti at aalto dot fi

Current / Ajankohtaista: *Health Recommender research project* is initiated and coordinated by Lauri Lahti (access to the project web site: <http://healthrecommender.org>).

Publications / Julkaisuja:

Lahti, Lauri (2020). Interpretation of the patient's need for help can be supported with machine learning. In Mansnérus, Juli, Lahti, Raimo, & Blick, Amanda (eds.), *Personalized medicine: legal and ethical challenges*. Pages 215-240. Faculty of Law, University of Helsinki, Finland, Forum Iuris Series, Helsinki, 2020. ISBN 978-951-51-6940-2 (printed), ISBN 978-951-51-5021-9 (pdf), ISSN 2670-1219. doi: 10.31885/9789515169419. <http://hdl.handle.net/10138/326164>

(Open access: <https://doi.org/10.31885/9789515169419>)

Abouelezz, Amr, Stefen, Holly, Segerstråle, Mikael, Micinski, David, Minkeviciene, Rimante, Lahti, Lauri, Hardeman, Edna C., Gunning, Peter W., Hoogenraad, Casper C., Taira, Tomi, Fath, Thomas, & Hotulainen, Pirta (2020). Tropomyosin Tpm3.1 is required to maintain the structure and function of the axon initial segment. *iScience*. 2020 Apr 12;23(5):101053. doi: 10.1016/j.isci.2020.101053. <https://www.sciencedirect.com/science/article/pii/S2589004220302388>

(Open access: <https://doi.org/10.1016/j.isci.2020.101053>)

Minkeviciene, Rimante, Hlushchenko, Iryna, Virenque, Anaïs, Lahti, Lauri, Khanal, Pushpa, Rauramaa, Tuomas, Koistinen, Arto, Leinonen, Ville, Noe, Francesco M., & Hotulainen, Pirta (2019). MIM-deficient mice exhibit anatomical changes in dendritic spines, cortex volume and brain ventricles, and functional changes in motor coordination and learning. *Frontiers in Molecular Neuroscience*, 12:276. doi: 10.3389/fnmol.2019.00276. <https://www.frontiersin.org/articles/10.3389/fnmol.2019.00276/full>

(Open access: <https://doi.org/10.3389/fnmol.2019.00276>)

Lahti, Lauri. (2018). Supporting care by interpretation of expressions about patient experience with machine learning. *International Journal of New Technology and Research (IJNTR)*, volume 4, issue 12 (December 2018), pages 27-34, ISSN 2454-4116. doi: 10.31871/IJNTR.4.12.16. https://www.ijntr.org/download_data/IJNTR04120016.pdf

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201812015463>)

Lahti, Lauri, Tenhunen, Henni, & Nieminen, Marko (2018). How patients talk about care? Identifying patient experience expressions from online discussions. *Proc. Medical Informatics Europe (MIE 2018)*, 24-26 April 2018, Gothenburg, Sweden (eds. Ugon, A., Karlsson, D., Klein, G., & Moen, A.), 116-120. European Federation for Medical Informatics (EFMI). ISBN 978-1-61499-851-8 (print) and ISBN 978-1-61499-852-5 (online). <http://ebooks.iospress.nl/volumearticle/48765>

(Open access: <http://ebooks.iospress.nl/volumearticle/48765>)

Lahti, Lauri, Tenhunen, Henni, Heinonen, Seppo, Helkavaara, Minna, Pöyhönen-Alho, Maritta, & Torkki, Paulus (submitted 2017). Manuscript "Development of computational models for emotional diary text analysis to support maternal care". Open access to this manuscript is at arxiv.org publication service: <https://arxiv.org/abs/1710.04158>. Submitted journal article manuscript currently in review process.

(Open access: <https://arxiv.org/abs/1710.04158>)

Lahti, Lauri (2017). Interpretation of health-related expressions and dialogues: enabling personalized care with contextual measuring and machine learning. *International Journal of New Technology and Research (IJNTR)*, volume 3, issue 11, November 2017, pages 171-179, ISSN 2454-4116. https://www.ijntr.org/download_data/IJNTR03110081.pdf

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201712298340>)

Lahti, Lauri (2016e). Supporting diagnostics and decision making in healthcare by modular methods of computational linguistics. *Proc. E-Learn 2016 - World Conference on E-Learning*, 14-16 November 2016, Washington, D.C., USA (eds. Ho, C., & Lin, G.), 1513-1519. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 978-1-939797-25-4. <https://www.learntechlib.org/p/174196>

(Open access: <http://urn.fi/URN:ISBN:978-1-939797-25-4>)

Lahti, Lauri (2016d). Supporting online health queries by modeling patterns of creation, modification and retrieval of medical knowledge. Proc. EdMedia 2016 - World Conference on Educational Media and Technology, 28–30 June 2016, Vancouver, B.C., Canada (ed. Veletsianos, G.), 705–712. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 978-1-939797-24-7. <http://www.learntechlib.org/p/173023>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201606202682>)

Lahti, Lauri (2016c). Enabling personalized healthcare by analyzing semantic dependencies in a conceptual co-occurrence network based on a medical vocabulary. International Journal of Information Technology & Computer Science (IJITCS), volume 23, issue no 1, May 2016 (editor-in-chief Nazri bin Mohd Nawi). Institute of Information System & Research Center (IISRC). ISSN 2091-1610. http://www.ijitcs.com/volume%2023_No_1/Lauri%20Lahti.pdf

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201605182039>)

Lahti, Lauri (2016b). Semantic modeling of healthcare guidelines to support health literacy and patient engagement. Proc. Global Learn 2016: Global Conference on Learning and Technology, 28–29 April 2016, Limerick, Ireland (eds. Kirby, P., & Marks, G.), 298–304. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 978-1-939797-23-0. <https://www.learntechlib.org/p/172737/>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201603291477>)

Lahti, Lauri (2016a). Evaluation of semantic dependencies in a conceptual co-occurrence network of a medical vocabulary. Proc. 5th International Conference on Human Computing, Education and Information Management System (ICHCEIMS 2016), 27–28 March 2016, Sydney, Australia.

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201603291476>)

Lahti, Lauri (2015c). Educational exploration along the shortest paths in conceptual networks based on co-occurrence, language ability levels and frequency ranking. Proc. E-Learn 2015 - World Conference on E-Learning, 19–22 October 2015, Kona, Hawaii, USA (eds. Ho, C., & Lin, G.), 31–36. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN: 978-1-939797-20-9. <http://www.editlib.org/p/151985/>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201509294488>)

Lahti, Lauri (2015b). Generation of learning paths in educational texts based on vocabulary co-occurrence networks in Wikipedia and randomness. Proc. Global Learn 2015: Global Conference on Learning and Technology, 16–17 April 2015, Berlin, Germany (eds. Bastiaens, T., & Marks, G.), 664–669. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 978-1-939797-14-8. <http://www.editlib.org/p/150943/>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182052>)

Doctoral dissertation:

Lahti, Lauri (2015a). Computer-assisted learning based on cumulative vocabularies, conceptual networks and Wikipedia linkage. Doctoral dissertation. Department of Computer Science, Aalto University School of Science, Finland. Unigrafia Oy, Helsinki, Finland. ISBN 978-952-60-6163-4 (printed), ISBN 978-952-60-6164-1 (pdf).

(Open access: <http://urn.fi/URN:ISBN:978-952-60-6164-1>)

Lahti, Lauri (2014c). Experimental evaluation of learning performance for exploring the shortest paths in hyperlink network of Wikipedia. Proc. World Conference on E-Learning in Corporate, Government, Healthcare and Higher Education 2014 (E-Learn 2014), 27–30 October 2014, New Orleans, Louisiana, USA (eds. Bastiaens, T., & Marks, G.), 1069–1074. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 978-1-939797-12-4. <http://www.editlib.org/p/148865/>

(Open access: <http://urn.fi/URN:ISBN:978-1-939797-12-4>)

Lahti, Lauri (2014b). Computational method for supporting learning with cumulative vocabularies, conceptual networks and Wikipedia linkage. International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), 5(2), June 2014 (eds. Shoniregun, C., & Cooper, R.), 1632–1644. Infonomics Society, UK. ISSN 2042-6364. <http://www.infonomics-society.org/IJCDSE/Computational%20Method%20for%20Supporting%20Learning.pdf>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182042>)

Lahti, Lauri (2014a). Educational exploration based on conceptual networks generated by students and Wikipedia linkage. Proc. World Conference on Educational Multimedia, Hypermedia and Telecommunications 2014 (EdMedia 2014). 23–27 June 2014, Tampere, Finland (eds. Herrington, J. et al.), 964–974. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 978-1-939797-08-7. <http://www.editlib.org/p/147608/>

(Open access: <http://urn.fi/URN:ISBN:978-1-939797-08-7>)

Lahti, Lauri (2013). Educational framework based on cumulative vocabularies, conceptual networks and Wikipedia linkage. Proc. London International Conference on Education 2013 (LICE 2013). 4–6 November 2013, London, UK (eds. Shoniregun, C., & Akmayeva, G.), 470–478. ISBN 978-1-908320-16-2.

(Open access: <http://urn.fi/URN:ISBN:978-1-908320-16-2>)

Lahti, Lauri (2012). Educational framework for adoption of vocabulary based on Wikipedia linkage and spaced learning. Proc. Global Learn 2012: Global Conference on Learning and Technology, online conference on 6 November 2012 (eds. Bastiaens, T., & Marks, G.), 8–13. Association for the Advancement of Computing in Education (AACE), Chesapeake, VA, USA. ISBN 1-880094-99-1. <http://www.editlib.org/p/42033/>

(Open access: <http://urn.fi/URN:ISBN:1-880094-99-1>)

Lahti, Lauri (2011b). Educational concept mapping method based on high-frequency words and Wikipedia linkage. Proc. 4th International Conference on Internet Technologies and Applications (ITA11), 6–9 September 2011, Wrexham, North Wales, UK (eds. Grout, V. et al.). Glyndwr University, Wrexham, Wales, UK. ISBN 978-0-946881-68-0. <http://www.ita11.org/papers.html>; <http://www.ita11.org/detailedProgramme.html>; <http://www.lulu.com/shop/vic-grout-and-stuart-cunningham-and-denise-oram-and-rich-picking/proceedings-of-the-fourth-international-conference-on-internet-technologies-and-applications-ita-11/ebook/product-17431522.html>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182041>)

Lahti, Lauri (2011a). ConceptMapWiki – a collaborative framework for agglomerating pedagogical knowledge. Proc. 11th IEEE International Conference on Advanced Learning Technologies (ICALT 2011), 6–8 July 2011, Athens, Georgia, USA (eds. Aedo, I. et al.), 163–165. Online ISBN 978-0-7695-4346-8 and Print ISBN 978-1-61284-209-7. http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5992312

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182040>)

Lahti, Lauri (2010b). Educational tool based on topology and evolution of hyperlinks in the Wikipedia. Proc. 10th IEEE International Conference on Advanced Learning Technologies (ICALT 2010), 5–7 July 2010, Sousse, Tunisia (eds. Jemni, M. et al.), 233–235. ISBN 978-0-7695-4055-9 and ISBN 978-1-4244-7144-7. http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5571281

(Open access: <http://urn.fi/URN:ISBN:978-0-7695-4055-9>)

Lahti, Lauri (2010a). Personalized learning paths based on Wikipedia article statistics. Proc. 2nd International Conference on Computer Supported Education (CSEDU 2010), 7–10 April 2010, Valencia, Spain (eds. Cordeiro, J. et al.), Vol. 1, 110–120. SciTePress, Institute for Systems and Technologies of Information, Control and Communication (INSTICC). ISBN 978-989-674-023-8. <http://dx.doi.org/10.5220/0002800901100120>

(Open access: <http://urn.fi/URN:ISBN:978-989-674-023-8>)

Lahti, Lauri (2009b). Guided generation of pedagogical concept maps from the Wikipedia. Proc. World Conference on E-Learning in Corporate, Government, Healthcare and Higher Education 2009 (E-Learn 2009), 26–30 October 2009, Vancouver, B.C., Canada (eds. Bastiaens, T. et al.). Association for the Advancement of Computing in Education (AACE), Chesapeake, Virginia, USA, 1741–1750. ISBN 1-880094-76-2. <http://www.editlib.org/p/32712/>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182039>)

Lahti, Lauri (2009a). Assistive tool for collaborative learning of conceptual structures. Proc. 13th Human Computer Interaction International 2009, Part III (Universal Access in Human-Computer Interaction – Applications and Services), 19–24 July 2009, San Diego, CA, USA (ed. Stephanidis, C.). LNCS 5616, Springer, 53–62. Print ISBN 978-3-642-02712-3 and Online ISBN 978-3-642-02713-0. http://link.springer.com/chapter/10.1007/978-3-642-02713-0_6

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182038>)

Ainoa, Juha, Kaskela, Antti, Lahti, Lauri, Saarikoski, Nina, Sivunen, Anu, Storgårds, Jan, & Zhang, He (2009). Future of living. In Neuvo, Y., & Ylönen, S. (eds.), Bit bang – rays to the future. Helsinki University of Technology (TKK), MIDE, Helsinki University Print, Helsinki, Finland, 174–204. ISBN 978-952-248-078-1.

(Open access: <http://lib.tkk.fi/Reports/2009/isbn9789522480781.pdf>)

Coatanéa, Eric, Kantola, Vesa, Kulovesi, Jakke, Lahti, Lauri, Lin, Ranran, & Zavodchikova, Marina (2009). Printed electronics, now and future. In Neuvo, Y., & Ylönen, S. (eds.), Bit bang – rays to the future. Helsinki University of Technology (TKK), MIDE, Helsinki University Print, Helsinki, Finland, 63–102. ISBN 978-952-248-078-1.

(Open access: <http://lib.tkk.fi/Reports/2009/isbn9789522480781.pdf>)

Medyna, Galina, Coatanéa, Eric, Lahti, Lauri, Howard, Thomas, Christophe, François, & Brace, William (2009). Creative design: analysis, ontology and stimulation. Proc. 5th World Conference on Mass Customization and Personalization (MCPC2009), 4–8 October 2009. University of Art and Design Helsinki (TaiK), Helsinki, Finland (eds. Suominen, J. et al.), 549–568. Aalto University School of Art and Design Publication Series B 102, Helsinki, Finland. ISBN 978-952-60-0033-6.

(Open access: <http://urn.fi/URN:ISBN:978-952-60-0033-6>)

Lahti, Lauri, & Tarhio, Jorma (2008). Semi-automated map generation for concept gaming. Proc. IADIS International Conference Gaming 2008 (part of IADIS Multi Conference on Computer Science and Information Systems (MCCSIS 2008)), 22–27 July 2008, Amsterdam, the Netherlands (eds. Xiao, Y., & ten Thij, E.), 36–43. International Association for Development of the Information Society (IADIS). ISBN 978-972-8924-63-8. <http://www.iadisportal.org/digital-library/semi-automated-map-generation-for-concept-gaming>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182051>)

Lahti, Lauri (2007). Kids' Clubin uusia versoja: musiikki tietokoneavusteisen erityisopetuksen motivoijana (Kids' Club's new sprouts: music as a motivator for computer-assisted special education). In "Kukaan ei oo keksinyt tällaista" - Erityisoppilaat opetusteknologian kehittäjinä ("No one has invented such as this" - Students with special needs as developers of educational technology) (eds. Jormanainen, I., & Lahti, L.). University of Joensuu, Department of Computer Science and Statistics, Technical Report, Series A, A-2007-3, Joensuu University Press, Joensuu, Finland, 69–78. ISBN 978-952-458-998-7, ISSN 1796-7317.

(Open access: http://www.cs.hut.fi/u/lahti/publ/lahti_2007.pdf; http://www.cs.hut.fi/u/lahti/publ/lahti_2007_english_abstract.pdf)

Lahti, Lauri, & Kurhila, Jaakko (2007). Low-cost portable text recognition and speech synthesis with generic software, laptop computer and digital camera. Proc. 12th Human Computer Interaction International 2007, Part II (Universal Access in Human-Computer Interaction - Ambient Interaction), 22–27 July 2007, Beijing, China (ed. Stephanidis, C.). LNCS 4555, Springer, 918–927. Print ISBN 978-3-540-73280-8 and Online ISBN 978-3-540-73281-5. http://link.springer.com/chapter/10.1007%2F978-3-540-73281-5_100

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182050>)

Jormanainen, Ilkka, Kärnä-Lin, Eija, Lahti, Lauri, Pihlainen-Bednarik, Kaisa, Sutinen, Erkki, Tarhio, Jorma, & Virnes, Marjo (2007). A framework for research on technology-enhanced special education. Proc. 7th IEEE International Conference on Advanced Learning Technologies (ICALT 2007), 18–20 July 2007, Niigata, Japan (ed. Spector, J., et al.), 54–55. Print ISBN 0-7695-2916-X. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4280948>

(Open access: <http://urn.fi/URN:NBN:fi:aalto-201503182049>)

Master's thesis:

Lahti, Lauri (2006). Näkövammaisten tietokoneavusteinen tiedon hankinta (Computer-assisted acquisition of information for visually impaired, in Finnish, supplied with an abstract in English). Master's thesis. Department of Computer Science, Faculty of Science, University of Helsinki. Report C-2006-32.

(Open access: <http://ethesis.helsinki.fi/julkaisut/mat/tieto/pg/lahti/>)