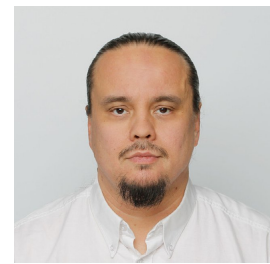


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Qualifications

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Master's degree, Engineering and Technology, Helsinki University of Technology
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Docentship

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Research outputs

Empirical Evaluation of a Differentiated Assessment of Data Structures: The Role of Prerequisite Skills

Begum, M., Haglund, P., Korhonen, A., Lonati, V., Monga, M., Strömbäck, F. & Tilanterä, A., 18 Jul 2023, (E-pub ahead of print) In: *Informatics in Education*.

Automated Questions about Learners' Own Code Help to Detect Fragile Prerequisite Knowledge

Lehtinen, T., Seppälä, O. & Korhonen, A., 29 Jun 2023, *ITiCSE 2023 - Proceedings of the 2023 Conference on Innovation and Technology in Computer Science Education*. ACM, p. 505-511 7 p.

Computing Education Research in Finland

Malmi, L., Hellas, A., Ihantola, P., Isomöttönen, V., Jormanainen, I., Kilamo, T., Knutas, A., Korhonen, A., Laakso, M.-J., López-Pernas, S., Poranen, T., Salakoski, T. & Suhonen, J., 2023, *Past, Present and Future of Computing Education Research : A Global Perspective*. Apiola, M., López-Pernas, S. & Saqr, M. (eds.). Cham: Springer, p. 335-372 38 p.

Software engineering teacher networks in Finland - what motivates teachers to collaborate?

Kilamo, T., Knutas, A., Korhonen, A., Poranen, T. & Sievi-Korte, O., 21 Sept 2022, *Proceedings of the 50th SEFI Conference (European Society for Engineering Education) 2022*. Jarvinen, H-M., Silvestre, S., Llorens, A. & Nagy, B. V. (eds.). Universitat Politècnica de Catalunya, p. 402-411

Towards a JSON-based Algorithm Animation Language

Tilanterä, A., Mariani, G., Korhonen, A. & Seppälä, O., 13 Nov 2021, *Proceedings - 2021 Working Conference on Software Visualization, VISSOFT 2021*. IEEE, p. 135-139 5 p.

Algorithm Visualization and the Elusive Modality Effect

Zavgorodniaia, A., Tilanterä, A., Korhonen, A., Seppälä, O., Hellas, A. & Sorva, J., 16 Aug 2021, *ICER 2021 - Proceedings of the 17th ACM Conference on International Computing Education Research*. ACM, p. 368-378 11 p.

New Acos Content Types

Korhonen, A., Mariani, G., Sormunen, P., Rybicki, J-M., Lukkarinen, A., Haaranen, L., Tilanterä, A. & Sorva, J., 15 Mar 2021, *Seventh SPLICE Workshop at SIGCSE 2021 "CS Education Infrastructure for All III: From Ideas to Practice"*. 5 p.

Differentiated Assessments for Advanced Courses that Reveal Issues with Prerequisite Skills: A Design Investigation

Nelson, G. L., Strömbäck, F., Korhonen, A., Begum, M., Blamey, B., Jin, K. H., Lonati, V., Mackellar, B. & Monga, M., 17 Jun 2020, *ITiCSE-WGR 2020 - Proceedings of the Working Group Reports on Innovation and Technology in Computer Science Education*. ACM, p. 75-129 55 p. 3439204. (Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE).

Assessing How Pre-requisite Skills Affect Learning of Advanced Concepts

Nelson, G. L., Strömbäck, F., Korhonen, A., Albluwi, I., Begum, M., Blamey, B., Jin, K. H., Lonati, V., Mackellar, B. & Monga, M., 15 Jun 2020, *ITiCSE 2020 - Proceedings of the 2020 ACM Conference on Innovation and Technology in Computer Science Education*. ACM, p. 506-507 2 p. (Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE).

Digital storytelling and group work: Integrating the narrative approach into a higher education computer science course

Korhonen, A. & Vivitsou, M., 2 Jul 2019, *ITiCSE 2019 - Proceedings of the 2019 ACM Conference on Innovation and Technology in Computer Science Education*. ACM, p. 140-146 7 p. (Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE).

Second Special Issue on Learning Analytics in Computing Education

Korhonen, A. & Grover, S., 1 Oct 2018, In: *ACM Transactions on Computing Education*. 18, 4, p. 1-2 16.

ICER 2018 chairs' welcome

Malmi, L., Korhonen, A., McCartney, R. & Petersen, A., 8 Aug 2018, p. iii.

Message from the working group chairs

Sheard, J. & Korhonen, A., 30 Jan 2018, In: *ITiCSE-WGR 2017 - Proceedings of the 2017 ITiCSE Conference on Working Group Reports*. 2018-January, p. iii

Second Special Issue on Learning Analytics in Computing Education

Korhonen, A. & Grover, S., 2018, In: ACM Transactions on Computing Education. 18, 4

ICER 2017 chairs' welcome

Tenenberg, J., Chinn, D., Malmi, L., Korhonen, A. & Sheard, J., 14 Aug 2017, p. iii.

Unlocking the potential of learning analytics in computing education

Grover, S. & Korhonen, A., 1 Aug 2017, In: ACM Transactions on Computing Education. 17, 3, 11e.

Educational data mining and learning analytics in programming: Literature review and case studies

Ihantola, P., Vihavainen, A., Ahadi, A., Butler, M., Börstler, J., Edwards, S. H., Isohanni, E., Korhonen, A., Petersen, A., Rivers, K., Rubio, M. Á., Sheard, J., Skupas, B., Spacco, J., Szabo, C. & Toll, D., 4 Jul 2016, *Proceedings of the 2015 ITiCSE Conference on Working Group Reports, ITiCSE-WGP 2015*. ACM, p. 41-63 23 p. (Annual Conference on Innovation & Technology in Computer Science Education).

Learning Analytics

Korhonen, A. & Multisilta, J., 2016, *New Ways to Teach and Learn in China and Finland: Crossing Boundaries with Technology*. Niemi, H. & Jia, J. (eds.). Frankfurt am Main : Peter Lang, p. 301-310 10 p.

Replication in Computing Education Research: Researcher Attitudes and Experiences

Ahadi, A., Hellas, A., Ihantola, P., Korhonen, A. & Petersen, A., 2016, *Proceedings of the 16th Koli Calling International Conference on Computing Education Research*. ACM, p. 2-11 10 p.

Automatic Recognition of Misconceptions in Visual Algorithm Simulation Exercises

Korhonen, A., Seppälä, O. & Sorva, J., 2015, *Frontiers in Education Conference, El Paso, Texas, USA, October 21-24, 2015*. IEEE, p. 1-5

The Effect of Achievement Badges on Students' Behavior: An Empirical Study in a University-Level Computer Science Course

Hakulinen, L., Auvinen, T. & Korhonen, A., 2015, In: INTERNATIONAL JOURNAL OF EMERGING TECHNOLOGIES IN LEARNING. 10, 1

FUN: Finland US Network for the Study of Engagement and Learning in Games

Viteli, J., Raisamo, R., Korhonen, A., Vesisenaho, M., Uusi-Mäkelä, M., Asbell-Clarke, J., Coller, B. & Shribman, B., 2014, *World Conference on Educational Multimedia, Hypermedia and Telecommunications*. Chesapeake, VA: Association for the Advancement of Computing in Education, p. 228-233

How (Not) to Introduce Badges to Online Exercises

Haaranen, L., Ihantola, P., Hakulinen, L. & Korhonen, A., 2014, *SIGCSE 2014, Atlanta, United States, March 5-8, 2014*. ACM, p. 33-38

Software Architectures for Implementing Achievement Badges - Practical Experiences

Haaranen, L., Hakulinen, L., Ihantola, P. & Korhonen, A., 2014, *Teaching and Learning in Computing and Engineering (LaTiCE), 2014 International Conference, Kuching, Malaysia, April 11-13 2014*. p. 41-46

Theoretical underpinnings of computing education research: what is the evidence?

Malmi, L., Sheard, J., Bednarik, R., Helminen, J., Kinnunen, P., Korhonen, A., Myller, N., Sorva, J. & Taherkhani, A., 2014, *International computing education research conference (ICER) 2014, Glasgow, Great-Britain, August 11-13, 2014*. ACM, p. 27-34

Empirical Study on the Effect of Achievement Badges in TRAKLA2 Online Learning Environment

Hakulinen, L., Auvinen, T. & Korhonen, A., 2013, *Learning and Teaching in Computing and Engineering (LaTiCE), Macau, March 21-24, 2013*. IEEE, p. 47-54

Misconceptions in Visual Algorithm Simulation Revisited: On UI's Effect on Student Performance, Attitudes and Misconceptions

Karavirta, V., Korhonen, A. & Seppälä, O., 2013, *Learning and Teaching in Computing and Engineering (LaTiCE), Macau, 21-24 March 2013*. Los Alamitos, CA; Washington; Tokyo: IEEE, p. 62-69

Requirements and design strategies for open source interactive computer science eBooks

Korhonen, A., Naps, T., Boisvert, C., Crescenzi, P., Karavirta, V., Mannila, L., Miller, B., Morrison, B., Rodger, S. H., Ross, R. & Shaffer, C. A., 2013, *Proceedings of the ITiCSE Working Group Reports Conference on Innovation and Technology in Computer Science Education-working Group Reports*. Barnes, D. J. (ed.). New York, NY, USA: ACM, p. 53-72

Categorizing Variations of Student-Implemented Sorting Algorithms

Taherkhani, A., Korhonen, A. & Malmi, L., 1 Jun 2012, In: *Computer Science Education*. 22, 2, p. 109-138

Automatic Recognition of Students' Sorting Algorithm Implementations in a Data Structures and Algorithms Course

Taherkhani, A., Korhonen, A. & Malmi, L., 2012, *Koli Calling 2012, International Conference on Computing Education Research*. ACM, p. 83-92

Visual Algorithm Simulation Exercises with Authentic Data Sets

Karavirta, V. & Korhonen, A., 2012, *Towards Learning and Instruction in Web 3.0*. Isaias, P., Ifenthaler, D., Sampson, D. G. & Spector, J. M. (eds.). New York, NY: Springer, p. 123-137

OpenDSA: Beginning a Community Active-eBook Project

Shaffer, C. A., Karavirta, V., Korhonen, A. & Naps, T. L., 2011, *11th Koli Calling International Conference on Computing Education Research, Joensuu, Finland, November 17-20, 2011*. p. 112-117

PeerWise — yhteisöllistä oppimista verkossa

Hakulinen, L. & Korhonen, A., 2011, In: *Tietojenkäsittelytiede*. 33, p. 15-26

Recognizing Algorithms Using Language Constructs, Software Metrics and Roles of Variables: An Experiment with Sorting Algorithms

Taherkhani, A., Korhonen, A. & Malmi, L., 31 May 2010, In: *Computer Journal*. 54, 7, p. 1049-1066 18 p.

A comprehensive taxonomy of algorithm animation languages

Karavirta, V., Korhonen, A., Malmi, L. & Naps, T., Feb 2010, In: *JOURNAL OF VISUAL LANGUAGES AND COMPUTING*. 21, 1, p. 1-22 22 p.

Algorithm Visualization System for Teaching Spatial Data Algorithms

Nikander, J., Helminen, J. & Korhonen, A., 2010, In: *JOURNAL OF INFORMATION TECHNOLOGY EDUCATION: RESEARCH*. 9, 9, p. 201-225

Characterizing research in computing education: a preliminary analysis of the literature

Malmi, L., Sheard, J., Bednarik, R., Helminen, J., Korhonen, A., Myller, N., Sorva, J. & Taherkhani, A., 2010, *The Sixth international workshop on Computing education research (ICER '10)*. ACM, New York, NY, USA. ACM, p. 3-12

Interaction Promotes Collaboration and Learning: Video Analysis of Algorithm Visualization Use during Collaborative Learning

Laakso, M.-J., Myller, N. & Korhonen, A., 2010, *Web Information Systems and Technologies*. Cordeiro, J. (ed.). Berlin, Heidelberg: Springer, p. 198-211 (Lecture Notes in Business Information Processing; vol. 45).

Making the most of using PeerWise in education

Hakulinen, L. & Korhonen, A., 2010, *The third ReflekTori symposium of Engineering Education, Espoo, Finland, December 9-10, 2010*. Myller, E. (ed.). Espoo: Aalto ARTS Books, p. 57-67

Quick Introduction to Programming with an Integrated Code Editor, Automatic Assessment and Visual Debugging Tool - Work in Progress

Helminen, J., Malmi, L. & Korhonen, A., 2010, *9th Koli Calling International Conference on Computing Education Research, 28-31.10.2009, Koli National Park, Finland*. Pears, A. & Schulte, C. (eds.). Uppsala universitet, p. 59-62

Tackling the challenges of a large course with blended learning

Auvinen, T., Hakulinen, L. & Korhonen, A., 2010, *Blended Learning in Finland*. Joutsenvirta, T. & Myyry, L. (eds.). Helsinki, Finland: Helsingin yliopisto, p. 126-137

TRAKLA2

Korhonen, A., Helminen, J., Karavirta, V. & Seppälä, O., 2010, *9th Koli Calling International Conference on Computing Education Research, Koli, Finland, October 29 November 1, 2009*. Pears, A. & Schulte, C. (eds.). Uppsala University: University of Joensuu, p. 43-46

Using Roles of Variables in Algorithm Recognition

Taherkhani, A., Malmi, L. & Korhonen, A., 2010, *9th Koli Calling International Conference on Computing Education Research, Koli, Finland, October 29 November 1, 2009*. Pears, A. & Schulte, C. (eds.). Sweden, p. 1-10

Algorithm Recognition by Static Analysis and Its Application in Students' Submissions Assessment Students' Submissions Assessment

Taherkhani, A., Malmi, L. & Korhonen, A., 2009, *Koli Calling, Koli, 13-16 marraskuu 2008*. p. 88-91

Algorithm Visualization System for Teaching Spatial Data Algorithms

Nikander, J., Helminen, J. & Korhonen, A., 2009, TKK, (CSE Series B; no. 6).

Applications of Visual Algorithm Simulation

Korhonen, A., 2009, *Handbook of Research on Discrete Event Simulation Environments: Technologies and Applications*. Abu-Taieh, E. (ed.). Hershey, PA, USA: IGI Global, p. 234-251

Comparing Learning Performance of Students Using Algorithm Visualizations Collaboratively on Different Engagement Levels

Laakso, M-J., Myller, N. & Korhonen, A., 2009, In: *Educational Technology and Society*. 12, 2, p. 267-282

HOW DOES ALGORITHM VISUALIZATION AFFECT COLLABORATION? Video Analysis of Engagement and Discussions

Korhonen, A., Laakso, M-J. & Myller, N., 2009, *WEBIST 2009, 23-26 March, Lisboa, Portugal*. Filipe, J. & Cordeiro, J. (eds.). Lisbon, Portugal: INSTICC - Institute for Systems and Technologies of Information, Control and Communication, p. 479-488

Active Learning and Examination Methods in a Data Structures and Algorithms Course

Malmi, L. & Korhonen, A., 2008, *Reflections on the Teaching of Programming*. Bennedsen, J. E. A. (ed.). LNCS 4821 ed. Berlin Heidelberg: Springer Gabler, p. 210-227

Enhancing Learning Management Systems to Better Support Computer Science Education

Roessling, G., Malmi, L., Clancy, M., Joy, M., Kerren, A., Korhonen, A., Moreno, A., Naps, T., Oeschle, R., Radenski, A., Ross, R. & Velsasquez-Iturbide, A., 2008, In: *ACM SIGCSE Bulletin*. 40, 4, p. 142-166

Experiences on Using TRAKLA2 to Teach Spatial Data Algorithms

Nikander, J., Helminen, J. & Korhonen, A., 2008, *Program Visualization Workshop, 3-4.7.2008, Madrid*. Guido Rößling, Á. V-I. (ed.). Spain, p. 59-66

Tietojenkäsittelytieteiden opetuksen kehittämisseminaari

Korhonen, A., 2008, In: *Tietojenkäsittelytiede*. 28, p. 66-75

Using Roles of Variables to Enhance Novice's Debugging Work

Laakso, M.-J., Malmi, L., Korhonen, A., Rajala, T., Kaila, E. & Salakoski, T., 2008, *Setting Knowledge Free: The Journal of Issues in Informing Science and Information Technology*. Cohen, E. (ed.). 5 ed. Informing Science Institute, p. 281-295

Analyzing engagement taxonomy in collaborative algorithm visualization

Myller, N., Laakso, M. & Korhonen, A., 2007, *The 12th annual SIGCSE conference on Innovation and technology in computer science education, June 25-27, 2007, Dundee, Scotland, UK*. ACM, p. 251-255

MatrixPro esittelyvideo

Karavirta, V., Korhonen, A. & Seppälä, O., 2007

Platform for Elaboration of Search Results

Korhonen, A., Litola, J. & Tarhio, J., 2007, *Web Information Systems and Technologies, March 3-6, Barcelona, Spain*. Joaquim Filipe, J. C. (ed.). Portugal: INSTICC Press, p. 263-269

Roles of Variables in Teaching

Sorva, J., Karavirta, V. & Korhonen, A., 2007, In: *Journal of Information Technology Education*. 6, p. 407-423

Visualization of Spatial Data Structures on Different Levels of Abstraction

Nikander, J., Korhonen, A., Valanto, E. & Virrantaus, K., 2007, In: *Electronic Notes in Theoretical Computer Science*. 178, p. 89-99

Visualization on Real-time Traffic Simulation Data Stream

Zhou, M., Malmi, L., Kosonen, I. & Korhonen, A., 2007, *14th World Congress On Intelligent Transport Systems, 9-13 Oct 2007, Beijing, China*. p. 13

Observations on student misconceptions—A case study of the Build Heap Algorithm

Seppälä, O., Malmi, L. & Korhonen, A., 1 Sept 2006, In: *Computer Science Education*. 16, 3, p. 241-255

Automatic Tutoring Question Generation During Algorithm Simulation

Karavirta, V. & Korhonen, A., 2006, *Koli Calling, Sixth Finnish/Baltic Sea Conference on Computer Science Education, 9.-12.11.2006, Joensuu*. p. 95-100

Experiences on Automatically Assessed Algorithm Simulation Exercises with Different Resubmission Policies

Malmi, L., Karavirta, V., Korhonen, A. & Nikander, J., 2006, In: *Journal on Educational Resources in Computing*. 5, 3, p. Article no 7

Integration of geographic information system for transportation with real-time traffic simulation system: Application framework

Mu, Z., Korhonen, A., Malmi, L., Kosonen, I. & Luttinen, T., 2006, *Travel Survey Methods, Information Technology, and Geospatial Data*. 1972 ed. p. 78-84 7 p. (TRANSPORTATION RESEARCH RECORD-SERIES; vol. 1972).

Integration of GIS-T with Real-time Traffic Simulation System: An Application Framework.

Zhou, M., Korhonen, A., Malmi, L., Kosonen, I. & Luttinen, R. T., 2006, *Transportation Research Board, 85th Annual Meeting, Washington D.C., January 22-26, 2006*. Washington D.C.: Transportation Research Board (TRB), p. 10

Ohjelmoinnin perusopetuksen verkostohanke

Ihantola, P., Karavirta, V., Korhonen, A. & Seppälä, O., 2006, p. s., (Ohjelmoinnin perusopetuksen kehittämisseminaari, 13.10.2006 Turku).

On the use of resubmissions in automatic assessment systems

Karavirta, V., Korhonen, A. & Malmi, L., 2006, In: *Computer Science Education*. 16, 3, p. 229

System for Enhanced Exploration And Querying

Rontu, M., Korhonen, A. & Malmi, L., 2006, *AVI'2006, Advanced Visual Interfaces, Venice, Italy, May 2006*. ACM, p. 508-511

Taxonomy of Algorithm Animation Languages

Karavirta, V., Korhonen, A. & Malmi, L., 2006, *SoftVis 06 - ACM Symposium on Software Visualization, Brighton, United Kingdom, September 04.-05., 2006*. USA: ACM, p. 77-85

TRAKLA2: A Practising Environment for Data Structures and Algorithms

Fallenius, E., Karavirta, V. & Korhonen, A., 2006, p. s., (Ohjelmoinnin perusopetuksen kehittämisseminaari, 13.10.2006 Turku).

Visualization of Spatial Data Structures on Different Levels of Abstraction

Nikander, J., Korhonen, A., Valanto, E. & Virrantaus, K., 2006, *Fourth Program Visualization Workshop, 29-30.6.2006, Florence, Italy*. p. 60-66

Algoritmisimulaatio tietorakenteiden ja algoritmien opetuksessa (Algorithm Simulation in teaching data structures and algorithms).In the collection of papers in Reflektori 2005.(in Finnish)

Ihantola, P., Korhonen, A. & Malmi, L., 2005, In: RefLektorii .

Different Learners Need Different Resubmission Policies in Automatic Assessment Systems

Karavirta, V., Korhonen, A. & Malmi, L., 2005, *Koli Calling 2005, Fifth Finnish / Baltic Sea Conference on Computer Science Education, 17-20.11.2005, Koli, Finland*. Turku Centre for Computer Science, p. 95-102

MatrixPro - Luentotyökalu tietorakenteiden ja algoritmien opetukseen

Seppälä, O., Karavirta, V. & Korhonen, A., 2005, *Reflektori 2005 tekniikan opetuksen symposium, 20. - 21.10.2005, Espoo*. Yanar, A. (ed.). Espoo: Teknillinen korkeakoulu, p. 49

Multi-Perspective Study of Novice Learners Adopting the Visual Algorithm Simulation Exercise System TRAKLA2

Laakso, M-J., Salakoski, T., Grandell, L., Qiu, X., Korhonen, A. & Malmi, L., 2005, In: *Informatics in Education*. 4, 1, p. 49-68

Observations on student errors in algorithm simulation exercises

Seppälä, O., Korhonen, A. & Malmi, L., 2005, *Koli Calling, 17-20.11.2005, Koli, Suomi*. Turku Centre for Computer Science, p. 81-86

Taxonomy of effortless creation of algorithm visualizations

Ihantola, P., Karavirta, V., Korhonen, A. & Nikander, J., 2005, *International Computing Education Research Workshop, October 01-02, Seattle, WA, USA*. New York, NY, USA: ACM, p. 123-133

The Feasibility of Automatic Assessment and Feedback

Laakso, M-J., Salakoski, T. & Korhonen, A., 2005, *Cognition and Exploratory Learning in Digital Age, December 14-16, Porto, Portugal*. IEEE, p. 113-122

Visuaalinen algoritmisimulaatio ja sen sovelluksia

Korhonen, A., 2005, In: *Tietojenkäsittelytiede*. 23, p. 42-59

Visuaalinen algoritmisimulaatio tietotekniikan opetuksessa

Korhonen, A., Ihantola, P. & Malmi, L., 2005, *Tekniikan opetuksen symposium 20.-21.10.2005, Espoo*. Yanar, A. (ed.). Espoo: Teknillinen korkeakoulu, p. 37

Automatic Assessment of Exercises for Algorithms and Data Structures - a Case Study with TRAKLA2

Laakso, M-J., Salakoski, T., Korhonen, A. & Malmi, L., 2004, *Kolin Kolistelut-Koli Calling 2004. Koli, Finland, October 1-3, 2004*. Korhonen, A. & Malmi, L. (eds.). Espoo: Helsinki University of Technology, p. 28-36

Automatic Feedback and Resubmission as Learning Aid

Malmi, L. & Korhonen, A., 2004, *IEEE International Conference on Advanced Learning Technologies, 2004. Proceedings..* Kinshuk, X., Looi, CK., Sutinen, E., Sampson, D., Aedo, I., Uden, L. & Kahkonen, E. (eds.). IEEE, p. 186-190 5 p.

Kolin Kolistelut - Koli Calling - Proceedings of the Fourth Finnish/Baltic Sea Conference on Computer Science Education

Korhonen, A. & Malmi, L., 2004, Espoo, p. 170, (Helsinki University of Technology, Department of Computer Science and Engineering Laboratory of Information Processing Science; no. TKO-A42/04).

Matrix A Framework for Interactive Software Visualization

Korhonen, A., Malmi, L., Silvasti, P., Karavirta, V., Lönnberg, J., Nikander, J., Stålnacke, K. & Ihanola, P., 2004, Espoo: Teknillinen korkeakoulu, p. 72, (Laboratory of Information Processing Science B; no. TKO-B 154/04).

MatrixPro - A tool for demonstrating data structures and algorithms ex tempore

Karavirta, V., Korhonen, A., Malmi, L. & Stålnacke, K., 2004, *IEEE International Conference on Advanced Learning Technologies, 2004. Proceedings..* Kinshuk, Looi, C-K., Sutinen, E., Sampson, D., Aedo, I., Uden, L. & Kaehkoenen, E. (eds.). IEEE, p. 892-893 2 p.

MatrixPro - A Tool for On-The-Fly Demonstration of Data Structures and Algorithms

Karavirta, V., Korhonen, A., Malmi, L. & Stålnacke, K., 2004, *Program Visualization Workshop, 1-2 July 2004, Warwick, UK.* Korhonen, A. (ed.). Warwick: University of Warwick, p. 26-33

MVT - A system for visual testing of software

Lönnberg, J., Korhonen, A. & Malmi, L., 2004, *Advanced Visual Interfaces, May 25-28 2004, Gallipoli, Italy.* NY, USA: ACM, p. 385-388

Proceedings of the Fourth Finnish/Baltic Sea Conference on Computer Science Education

Korhonen, A. & Malmi, L., 2004, Espoo: Helsinki University of Technology. 170 p.

Proceedings of the Third Program Visualization Workshop

Korhonen, A., 2004, Warwick, UK: University of Warwick. 156 p. (Department of Computer Science, Research Report ; no. 407)

Survey of Effortlessness in Algorithm Visualization Systems

Karavirta, V., Korhonen, A. & Tenhunen, P., 2004, *Program Visualization Workshop, 1-2 July 2004, Warwick, UK.* Korhonen, A. (ed.). Warwick: University of Warwick, p. 141-148

Taxonomy of Visual Algorithm Simulation Exercises

Korhonen, A. & Malmi, L., 2004, *Program Visualization Workshop, 1-2 July 2004, Warwick, UK.* Korhonen, A. (ed.). Warwick: University of Warwick, p. 118-125

Visual Algorithm Simulation Exercise System with Automatic Assessment: TRAKLA2

Malmi, L., Karavirta, V., Korhonen, A., Nikander, J., Seppälä, O. & Silvasti, P., 2004, In: *Informatics in Education.* 3, 2, p. 267-289

Evaluating the educational impact of visualization, Report of the ITICSE'2003 working group on

Naps, T., Cooper, S., Koldehofe, B., Leska, C., Roesling, G., Dann, W., Korhonen, A., Malmi, L., Rantakokko, J., Ross, R., Anderson, J., Fleischer, R., Kuittinen, M. & McNally, M., 2003, In: *ACM SIGCSE Bulletin.* 35, 4, p. 124-136

Exploring the Role of Visualization and Engagement in Computer Science Education

Naps, T., Rößling, G., Almström, V., Dann, W., Fleischer, R., Hundhausen, C., Korhonen, A., Malmi, L., McNally, M., Rodger, S. & Velázquez-Iturbide, J., 2003, In: *SIGCSE Bulletin inroads.* 35, 2, p. 131-152

Interaction and Feedback in Automatically Assessed Algorithm Simulation Exercises

Korhonen, A., Malmi, L., Nikander, J. & Tenhunen, P., 2003, In: *Journal of Information Technology Education*. 2, p. 241-255

Internet-based Training of Data Structures and Algorithms at University Education

Korhonen, A. & Malmi, L., 2003, *Collaboration and Learning in Virtual Environments*. Bopry, J. & Eteläpelto, A. (eds.). Jyväskylä, Finland: University of Jyväskylä, p. 137-146

MatrixPro

Karavirta, V., Korhonen, A. & Malmi, L., 2003

Tietojenkäsittelytieteen päivät 2003

Korhonen, A. & Tarhio, J., 2003, Espoo: Tietojenkäsittelytieteen Seura. 69 p. (Teknillinen korkeakoulu. Tietotekniikan osasto. Tietojenkäsittelyopin laboratorio. A.; no. 39)

TRAKLA2

Korhonen, A., Malmi, L., Silvasti, P., Nikander, J., Tenhunen, P., Mård, P., Salonen, H. & Karavirta, V., 2003

TRAKLA2: a Framework for Automatically Assessed Visual Algorithm Simulation Exercises

Korhonen, A., Malmi, L. & Silvasti, P., 2003, *Kolin Kolistelut - Koli Calling, Oct. 3-5, 2003 in Koli Finland*. Kurhila, J. (ed.). Helsinki: University of Helsinki, p. 48-56

Algorithm Simulation - A Novel Way to Specify Algorithm Animations

Korhonen, A., Malmi, L., Nikander, J. & Silvasti, P., 2002, *Second Program Visualization Workshop, June 27-28, HornstrupCentret, Denmark*. Ben-Ari, M. & Kölling, M. (eds.). University of Southern Denmark, p. 6

Automatic Feedback and Algorithm Simulation

Korhonen, A., Malmi, L., Nikander, J. & Tenhunen, P., 2002, *Proceedings of the First Annual Finnish/Baltic Sea Conference on Computer Science Education*. Joensuu, Finland, p. 20-26

Does It Make A Difference If the Students Exercise on the Web Or in the Class Room?

Korhonen, A., Malmi, L. & Scheinin, P., 2002, *Conference on Innovation and Technology in Computer Science Education, June 24-26, Aarhus, Denmark*. ACM, p. 121-124

Effortless Creation of Algorithm Visualization

Karavirta, V., Korhonen, A., Nikander, J. & Tenhunen, P., 2002, *Proceedings of the Second Annual Finnish/Baltic Sea Conference on Computer Science Education*. Kuittinen, M. (ed.). Joensuu: University of Joensuu, p. 52-56

Electronic course material on Data Structures and Algorithms

Korhonen, A., Malmi, L., Mård, P., Salonen, H. & Silvasti, P., 2002, *Proceedings of the Second Annual Finnish/Baltic Sea Conference on Computer Science Education*. Kuittinen, M. (ed.). Joensuu: University of Joensuu, p. 16-20

Experiences in automatic assessment on mass courses and issues for designing virtual courses

Malmi, L., Korhonen, A. & Saikkonen, R., 2002, *ITICSE'2002, Innovation and technology in computer science education, June 2002, Aarhus, Denmark*. ACM, p. 55-59

Matrix - Concept Animation and Algorithm Simulation System

Korhonen, A. & Malmi, L., 2002, *Proceedings of the Working Conference on Advanced Visual Interfaces*. De Marsico, M., Levialdi, S. & Panizzi, E. (eds.). Trento, Italy: ACM, p. 109-114

Understanding Algorithms by Means of Visualized Path Testing

Korhonen, A., Sutinen, E. & Tarhio, J., 2002, *Software Visualization. International Seminar, Dagstuhl Castle, Germany, May 20-25, 2001. Revised Papers*. Diehl, S. (ed.). Germany, p. 256-268

Matrix - Concept animation and algorithm simulation system

Korhonen, A., Malmi, L. & Saikkonen, R., 1 Dec 2001. 1 p.

Design Pattern for Algorithm Animation and Simulation

Korhonen, A., Malmi, L. & Saikkonen, R., 2001, *The First International Program Visualization Workshop, Porvoo, Finland, 2000*. Sutinen, E. (ed.). Joensuu: University of Joensuu, p. 89-100

Fully Automatic Assessment of Programming Exercises

Saikkonen, R., Malmi, L. & Korhonen, A., 2001, *The 6th Annual SIGCSE/SIGCUE Conference on Innovation and Technology in Computer Science Education - ITiCSE 2001, Canterbury, UK, 2001*. Finkel, D. (ed.). Canterbury, UK: ACM, p. 133-136

Matrix - Algorithm Simulation and Animation Framework

Korhonen, A., Nikander, J., Saikkonen, R. & Tenhunen, P., 2001

Algorithm Simulation with Automatic Assessment

Korhonen, A. & Malmi, L., 2000, *ITICSE 2000: PROCEEDINGS OF THE 5TH ANNUAL SIGCSE/SIGCUE CONFERENCE ON INNOVATION AND TECHNOLOGY IN COMPUTER SCIENCE EDUCATION*. Joyce, D. (ed.). ACM, p. 160-163 4 p. (SIGCSE BULLETIN : A QUARTERLY PUBLICATION OF THE SPECIAL INTEREST GROUP ON COMPUTER SCIENCE EDUCATION; vol. 32, no. 3).

New Methods for Teaching Data Structures and Algorithms

Malmi, L. & Korhonen, A., 2000, *Inno2000, International Conference of Innovations in Higher Education, August 2000, Helsinki, Finland*. Helsinki: Helsingin yliopisto, p. 69

Activities

Annual Conference on Innovation and Technology in Computer Science Education

Ari Korhonen (Member)

2023 → 2024

Journal of Systems and Software (Journal)

Ari Korhonen (Editorial board member)

2023 → 2024

Intelligent Tutoring for Algorithm Visualization Exercises

Artturi Tilanterä (Speaker) & Ari Korhonen (Speaker)

18 Nov 2021

New Acos Content Types

Ari Korhonen (Speaker), Giacomo Mariani (Speaker), Peter Sormunen (Speaker), Jan-Mikael Rybicki (Speaker), Aleksi Lukkarinen (Speaker), Lassi Haaranen (Speaker), Artturi Tilanterä (Speaker) & Juha Sorva (Speaker)

15 Mar 2021 → 16 Mar 2021

ACM Conference on International Computing Education Research

Ari Korhonen (Member)

2021 → 2023

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Reviewer)

2021

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Editorial board member)

2021 → 2022

Informatics in Education (Journal)

Ari Korhonen (Reviewer)

2021

Koli Calling - International Conference on Computing Education Research

Ari Korhonen (Member)

2021 → 2023

Koli Calling - International Conference on Computing Education Research (Event)

Ari Korhonen (Reviewer)

2021

University of Oslo (Publisher)

Ari Korhonen (Editorial board member)

2021 → 2022

Annual Conference on Innovation and Technology in Computer Science Education

Ari Korhonen (Participant)

14 Jun 2020 → 17 Jun 2020

IEEE Transactions on Learning Technologies (Journal)

Ari Korhonen (Reviewer)

2020 → 2022

ACM Conference on International Computing Education Research

Ari Korhonen (Participant)

12 Aug 2019 → 14 Aug 2019

Annual Conference on Innovation and Technology in Computer Science Education

Ari Korhonen (Participant)

15 Jul 2019 → 17 Jul 2019

International GamiFIN Conference (Event)

Ari Korhonen (Reviewer)

8 Apr 2019 → 10 Apr 2019

Koli Calling - International Conference on Computing Education Research

Ari Korhonen (Participant)

22 Nov 2018 → 25 Nov 2018

ACM Conference on International Computing Education Research

Ari Korhonen (Chair)

12 Aug 2018 → 16 Aug 2018

Annual Conference on Innovation and Technology in Computer Science Education

Ari Korhonen (Participant)

30 Jun 2018 → 4 Jul 2018

ACM Technical Symposium on Computer Science Education

Ari Korhonen (Participant)

21 Feb 2018 → 24 Feb 2018

ANNUAL CONFERENCE ON INNOVATION AND TECHNOLOGY IN COMPUTER SCIENCE EDUCATION (Event)

Ari Korhonen (Member)
2018 → 2021

Computer Science Education (Journal)

Ari Korhonen (Reviewer)
2018 → 2019

International Computing Education Research Conference

Ari Korhonen (Member)
18 Aug 2017 → 20 Aug 2017

Annual Conference on Innovation and Technology in Computer Science Education

Ari Korhonen (Member)
1 Jul 2017 → 5 Jul 2017

ACM Conference on International Computing Education Research (Event)

Ari Korhonen (Reviewer)
2017 → ...

CICERO SIG: Educational Data Mining and Learning Analytics in Digital Learning

Ari Korhonen (Speaker)
9 Dec 2016

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Editorial board member)
1 Jan 2016 → 31 Dec 2018

ACM Inroads (Journal)

Ari Korhonen (Reviewer)
2016

ACM Transactions on Applied Perception (Journal)

Ari Korhonen (Reviewer)
2016 → 2017

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Reviewer)
2016 → ...

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Guest editor)
2016 → 2018

Annual Conference of the European Society for Engineering Education

Ari Korhonen (Organiser)
2016

Annual Conference of the European Society for Engineering Education

Ari Korhonen (Member)
2016

International Journal of Engineering Education (Journal)

Ari Korhonen (Reviewer)
2016

Media Education Conference

Ari Korhonen (Member)
Dec 2015

Annual Conference on Innovation and Technology in Computer Science Education

Ari Korhonen (Member)
6 Jul 2015 → 8 Jul 2015

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Editorial board member)
2015

IEEE (External organisation)

Ari Korhonen (Chair)
2015

Sanna Heikkinen (Aalto University) August 2014

Ari Korhonen (Reviewer)
Aug 2014

Anne-Kathrin Peters (Uppsala University) Sweden

Ari Korhonen (Opponent)
25 Apr 2014

Stanford University

Ari Korhonen (Visiting researcher)
2014

University (External organisation)

Ari Korhonen (Chair)
2014

Interactive Technology in Education Conference

Ari Korhonen (Member)
2013 → 2021

Stanford University

Ari Korhonen (Visiting researcher)
2013

University (External organisation)

Ari Korhonen (Chair)
2013

University (External organisation)

Ari Korhonen (Chair)
2013

University (External organisation)

Ari Korhonen (Chair)
2012

Virginia Tech

Ari Korhonen (Visiting researcher)
2012

Antonio Pérez Carrasco

Ari Korhonen (Host)
1 Jan 2011

Cliff Shaffer

Ari Korhonen (Host)
1 Jan 2011

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2011

Universidad Rey Juan Carlos

Ari Korhonen (Visiting researcher)
2011

University (External organisation)

Ari Korhonen (Chair)
2011

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2010

University (External organisation)

Ari Korhonen (Chair)
2010

IEEE Transactions on Learning Technologies (Journal)

Ari Korhonen (Reviewer)
1 Jan 2009 → ...

ACM Transactions on Computing Education (Journal)

Ari Korhonen (Reviewer)
2009 → ...

Foreign Visitor

Ari Korhonen (Host)
2009

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2009

University (External organisation)

Ari Korhonen (Chair)
2009

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2008

University (External organisation)

Ari Korhonen (Chair)
2008

Foreign Visitor

Ari Korhonen (Host)
2007

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2007

Foreign Visitor

Ari Korhonen (Host)
2006

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2006

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editor-in-chief)
2005

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2005

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editor-in-chief)
2004

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2004

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2003

Foreign Organisation

Ari Korhonen (Visiting researcher)
2002

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editor-in-chief)
2002

Tietojenkäsittelytiede (Journal)

Ari Korhonen (Editorial board member)
2002

University (External organisation)

Ari Korhonen (Chair)
2002

University (External organisation)

Ari Korhonen (Chair)
2001

University (External organisation)

Ari Korhonen (Chair)
1999

Projects

EAGER: EAGER: Dynamic Digital Text- An Innovation in STEM Education

Korhonen, A. & Hakulinen, L.
01/01/2013 → 31/12/2014

FUN: Suomi - USA pelitutkimusverkoston hanke: Pelit oppimisympäristönä

Korhonen, A., Hakulinen, L. & Malmi, L.
01/11/2012 → 31/10/2014