

Publications (complete list)

A total of ~50 peer-reviewed publications of which 6 are journal and 2 are magazine articles, the majority of the rest are conference papers. In addition, ~5 internal reports. Listed in reverse chronological order grouped according to publisher.

ACM Press

- Jalaliniya, S., Mardanbegi, D., and Pederson, T. (2015). MAGIC pointing for eyewear computers. In Proceedings of the 2015 ACM international Symposium on Wearable Computers (Osaka, Japan, September 07 - 11, 2015). ISWC '15. ACM, New York, NY, 155-158. DOI= <http://doi.acm.org/10.1145/2802083.2802094> [PDF]
- Jalaliniya, S., Pederson, T., & Houben, S. (2014). Wearable laser pointer versus head-mounted display for tele-guidance applications?. In Proceedings of the 2014 ACM International Symposium on Wearable Computers: Adjunct Program (ISWC '14 Adjunct). ACM, New York, NY, USA, 193-200. DOI: 10.1145/2641248.2641354 [PDF]
- Jalaliniya, S., Smith, J., Sousa, M., Büthe, L., and Pederson, T. (2013). Touch-less interaction with medical images using hand & foot gestures. In Proceedings of the 2013 ACM conference on Pervasive and ubiquitous computing adjunct publication (UbiComp '13 Adjunct). ACM, New York, NY, USA, 1265-1274. DOI=10.1145/2494091.2497332 <http://doi.acm.org/10.1145/2494091.2497332> [PDF]
- Jalaliniya, S., and Pederson, T. (2012). A wearable kids' health monitoring system on smartphone. In Proceedings of the 7th Nordic Conference on Human-Computer Interaction: Making Sense Through Design (NordiCHI '12). ACM, New York, NY, USA, 791-792. DOI=10.1145/2399016.2399150 <http://doi.acm.org/10.1145/2399016.2399150> [PDF]
- Mardanbegi, D., Witzner Hansen, D., & Pederson, T. (2012). Eye-based head gestures. In Proceedings of the Symposium on Eye Tracking Research and Applications (ETRA '12). ACM, New York, NY, USA, 139-146. DOI=10.1145/2168556.2168578 (**Best paper award**) [PDF]
- Bardram, J. E., Bjørn, P., Glenstrup, A. J. & Pederson, T. (2011). The Global Interaction Research Initiative at the IT University of Copenhagen, Denmark. In Proceedings of the 23rd ACM Conference on Computer Supported Cooperative Work. Hangzhou, China, ACM Press, pp. 489-496. [PDF]
- Pederson, T., Janlert, L.-E. & Surie, D. (2010). Towards a model for egocentric interaction with physical and virtual objects. In Proceedings of the 6th Nordic Conference on Human-Computer Interaction: Extending Boundaries. ACM Press, pp. 755-758. [PDF]
- Costabile, M. F., De Angeli, A., Lanzilotti, R., Ardito, C., Buono, P., Pederson, T. (2008). Explore! Possibilities and Challenges of Mobile Learning. In Proceedings of ACM CHI 2008 Conference on Human Factors in Computing Systems, ACM Press, pp. 145-154. [PDF]
- Ardito, C., Costabile, M. F., Lanzilotti, R., Pederson, T. (2007). Making Dead History Come Alive Through Mobile Game-Play. In Extended Abstracts of the ACM CHI 2007 Conference, ACM Press, pp. 2249-2254. [PDF]
- Pederson, T. (2004). Magic Touch. In Video Proceedings of UBICOMP2004, Nottingham, UK, ACM Press. [6 mins narrated video](#) (50 MB, WMV format); [Proceedings paper](#) (PDF)

- Battarbee, K., Baerten, N., Hinfelaar, M., Irvine, P., Loeber, S., Munro, A., & Pederson, T. (2002). Pools and Satellites -- Intimacy in the City. In Proceedings of ACM DIS2002 Conference on Designing Interactive Systems, ACM Press, pp. 237-245. [PDF]
- Pederson, T. (2000). Human Hands as a Link between Physical and Virtual. In Proceedings of DARE 2000 on Designing Augmented Reality Environments, ACM Press, 153-154. [PDF]

EAI Press

- Jalalinya, S., & Pederson, T. (in press). A Wearable Personal Assistant for Surgeons -- Design, Evaluation, and Future Prospects. In EAI Endorsed Transactions, Special Issue on Pervasive Health and Technology (<http://eai.eu/transaction/pervasive-health-and-technology>).

Elsevier

- Surie, D., Janlert, L-E., Pederson, T., Roy, D. (2012). Egocentric interaction as a tool for designing ambient ecologies -- The case of the easy ADL ecology. Journal of Pervasive and Mobile Computing, Special Issue on Ambient Ecologies, Elsevier, Vol. 8, Issue 4, pp. 597-613, (2012). [PDF]

IEEE Press

- Jalaliniya, S., & Pederson, T. (2015). Designing Wearable Personal Assistants for Surgeons: An Egocentric Approach. IEEE Pervasive Computing Magazine, vol.14, no.3, pp.22,31, July-Sept. DOI: 10.1109/MPRV.2015.61 [PDF]
- Jalaliniya, S., Mardanbeigi, D., Pederson, T., and Hansen, D.W. (2014). Head and Eye Movement as Pointing Modalities for Eyewear Computers. In Proceedings of the 11th International Conference on Wearable and Implantable Body Sensor Networks (BSN Workshops), pp.50-53, IEEE Press, doi: 10.1109/BSN.Workshops.2014.14 [PDF]
- Surie, D., Pederson, T., Janlert, L-E. (2012). A Smart Home Experience using Egocentric Interaction Design Principles. IEEE 15th International Conference on Computational Science and Engineering, IEEE Computer Society Press, Paphos, Cyprus, pp. 656-665. [PDF]
- Pederson, T., Janlert, L.-E., Surie, D. (2011). A Situative Space Model for Mobile Mixed-Reality Computing. IEEE Pervasive Computing Magazine, vol. 10, no. 4, pp. 73-83, Oct. 2011. [PDF]
- Surie, D., Jaeckel, F., Janlert, L. & Pederson, T. (2010). Situative Space Tracking within Smart Environments. In Proceedings of the 6th International Conference on Intelligent Environments. IEEE Press, pp. 152-157. [PDF]
- Ardito, C., Buono, P., Costabile, M. F., Lanzilotti, R., Pederson, T., Piccinno, A. (2008). Experiencing the Past through the Senses: An M-Learning Game at Archaeological Parks. IEEE Multimedia, vol. 15, no. 4, pp. 76-81, Oct.-Dec. 2008. [PDF]
- Surie, D., Laguionie, O., Pederson, T. (2008). Wireless Sensor Networking of Everyday Objects in a Smart Home Environment. In Proceedings of the 4th International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP 2008), IEEE Press, pp. 189-194. [PDF]
- Ardito, C., Buono, P., Costabile, M. F., Lanzilotti, R., Pederson, T. (2007). Mobile games to foster the learning of history at archaeological sites. In Proceedings of IEEE VL/HCC 2007 Symposium on Visual Languages and Human-Centric Computing, IEEE Press, pp. 81-84. [PDF]

IOS Press

Surie, D., Pederson, T. & Janlert, L. (2010). The easy ADL home: A physical-virtual approach to domestic living. *Journal of Ambient Intelligence and Smart Environments*, Volume 2 Issue 3, August 2010, IOS Press, pp. 287-310. [\[PDF\]](#)

Springer

Surie, D., Pederson, T., and Janlert, L.E. (2012). Human cognition as a foundation for the emerging egocentric interaction paradigm. In Zacarias, M., de Oliveira, J., eds.: *Human-Computer Interaction: The Agency Perspective*. Volume 396 of *Studies in Computational Intelligence*. Springer Berlin Heidelberg (2012) 349–374. [\[link\]](#)

Pederson, T., Ardito, C., Bottoni, P., Costabile, M. F. (2008). A General-Purpose Context Modeling Architecture for Adaptive Mobile Services. In *Proceedings of the ER Workshops 2008, Section M2AS: First International Workshop on Modeling Mobile Applications and Services: Mobile Systems and Architecture*. Springer LNCS 5232, pp. 208-217. [\[PDF\]](#)

Pederson, T., Surie, D. (2007). Towards an Activity-Aware Wearable Computing Platform Based on an Egocentric Interaction Model. In *Proceedings of IFIP UCS 2007 Conference on Ubiquitous Computing Systems*, Springer LNCS 4836, pp. 211–227. [\[PDF\]](#)

Surie, D., Lagriffoul, F., Pederson, T., Sjölie, D. (2007). Activity Recognition based on Intra and Extra Manipulation of Everyday Objects. In *Proceedings of IFIP UCS 2007 Conference on Ubiquitous Computing Systems*, Springer LNCS 4836, pp. 196-210. [\[PDF\]](#)

Surie, D., Pederson, T. (2007). An Activity-Centered Wearable Computing Infrastructure for Intelligent Environment Applications. In *Proceedings of IFIP EUC 2007 Conference on Embedded and Ubiquitous Computing*, Springer LNCS 4808, pp. 456-465. [\[PDF\]](#)

Ardito, C., Buono, P., Costabile, M. F., Lanzilotti, R., Pederson, T. (2007). Re-experiencing History in Archaeological Parks by Playing a Mobile Augmented Reality Game. In *Proceedings of the OTM MONET'07 Workshop*, Springer LNCS 4805, pp. 357-366. [\[PDF\]](#)

Surie, D., Pederson, T., Lagriffoul, F., Janlert, L.-E., & Sjölie, D. (2007). Activity Recognition using an Egocentric Perspective of Everyday Objects. In *Proceedings of IFIP UIC 2007 Conference on Ubiquitous and Intelligent Computing*, Springer LNCS 4611, pp. 246-257. *** Best Paper Award *** [\[PDF\]](#)

Pederson, T. (2001). Magic Touch: A Simple Object Location Tracking System Enabling the Development of Physical-Virtual Artefacts in Office Environments. *Journal of Personal and Ubiquitous Computing*, 5:54-57. Springer Verlag, February 2001. [\[PDF\]](#)

Other

Jalaliniya, S., & Pederson, T. (2016). Qualitative Study of Surgeons Using a Wearable Personal Assistant in Surgeries & Ward Rounds. To appear in *EAI Endorsed Transactions on Pervasive Health and Technology*. In Press. 12 pages.

Bolton, F., Jalaliniya, S., & Pederson, T. (2015). A Wrist-Worn Thermohaptic Device for Graceful Interruption. *IXDA Journal special issue on Designing for Peripheral Interaction: seamlessly integrating interactive technology in everyday life*. pp. 39-54. [\[PDF\]](#)

- Pederson, T., Witzner Hansen, D., Mardanbeigi, D. (2011). Investigations of the Role of Gaze in Mixed-Reality Personal Computing. In Proceedings of the 2nd Workshop on Eye Gaze in Intelligent Human Machine Interaction held at IUI'2011, Stanford, February 13. http://www.ci.seikei.ac.jp/nakano/GAZEWS_IUI2011/ [PDF] [poster]
- Pederson, T., Shaer, O. & Wakkary, R. (2010). Welcome to the TEI'10 Proceedings, Program Chairs' Intro. Proceedings of the Fourth International Conference on Tangible, Embedded, and Embodied Interaction. Coelho, M., Zigelbaum, J., Ishii, H., Jacob, R. J. K., Maes, P., Pederson, T., Shaer, O. & Wakkary, R. (eds.). Cambridge, Massachusetts, ACM Press, p. iv. 1 p. [PDF]
- Kindberg, T., Pederson, T. & Sukthakar, R. (2010). Guest Editors' Introduction: Labeling the World. IEEE Pervasive Computing. Vol 9, Issue 2, pp. 8-10. IEEE Press. [PDF]
- Pederson, T., Piccinno, A., Surie, D., Ardito, C., Caporusso, N., Janlert, L.-E. (2008). Framing the Next-Generation 'Desktop' using Proximity and Human Perception. Unpublished manuscript presented at the ACM CHI 2008 Conference Workshop on User Interface Description Languages for Next-Generation User Interfaces. 4 pages. [PDF]
- Pederson T. (2007). Can Tangible User Interface Concepts be used for Describing Everyday Object Manipulation? In Online Proceedings of the ACM CHI 2007 Workshop on Tangible User Interfaces in Context and Theory. <http://www.cl.cam.ac.uk/conference/tangibleinterfaces/> [PDF]
- Pederson T., Pinto H., Schmitz M., Stahl C., and Terrenghi L. (Eds.), SFB 378 Resource-Adaptive Cognitive Processes, Memo Nr. 86: Modelling and Designing User Assistance in Intelligent Environments (MODIE 2006) Workshop in Conjunction with the 8th International Conference on Human Computer Interaction with Mobile Devices and Services (ACM MobileHCI 2006), ISSN 0944-7822, Saarland University, 2006. [PDF]
- Pederson, T. (2006). Egocentric Interaction. Workshop on What is the Next Generation of Human-Computer Interaction? CHI2006, April 22-23, Montréal, Canada. In Technical Report 2006-3, Department of Computer Science, Tufts University, Medford, Mass. pp77-80. <http://www.cs.tufts.edu/tr/techreps/TR-2006-3> [PDF]
- Pederson T., Lanzilotti R., Montinaro F., and Costabile M. F., Thinking out of the box – user experience as viewed from an egocentric interaction perspective. In Online Proceedings of the ACM NordiCHI 2006 / COST Action 294: MAUSE Workshop on User Experience – Towards a unified view, pp. 45–50. <http://cost294.org/upload/408.pdf> [PDF]
- Ardito C., Pederson T., and Costabile M. F. (2006). CHAT – Towards a general-purpose infrastructure for multimodal situation-adaptive user assistance. In Proceedings of ACM MobileHCI Workshop on Modelling and Designing User Assistance in Intelligent Environments (MODIE 2006). Published as SFB 378 Resource-Adaptive Cognitive Processes, Memo Nr. 86: Pederson T., Pinto H., Schmitz M., Stahl C., Terrenghi L. (Eds.): MODIE 2006, ISSN 0944-7822, Saarland University, pp. 27–31. [PDF]
- Ardito, C., Pederson, T., Costabile, M. F., Lanzilotti, R. (2006). Providing multimodal context-sensitive services to mobile users. In the Online Proceedings of the Italian National Event on Virtual Mobile Guides 2006, Turin, Italy, October 18 2006. <http://mobileguide06.di.unito.it/pdf/Ardito&al.pdf>. [PDF]
- Backman, A., Bodin, K., Bucht, G., Janlert, L.-E., Maxhall, M., Pederson, T., Sjölie, D., Sondell, B., & Surie, D. (2006). easyADL – Wearable Support System for Independent Life despite Dementia. Workshop on Designing Technology for People with Cognitive Impairments, CHI2006, April 22-23, Montréal, Canada. [PDF]

- Pederson, T. (2005). Egocentric Interaction – A Design and Modelling Framework for Situative Physical-Virtual Applications. Workshop on User Experience Design for Pervasive Computing, PERVASIVE2005, May 11, Munich, Germany. [PDF]
- Pederson, T. (2004). Using Causality to Close the Physical-Virtual Gap. Workshop on Invisible & Transparent Interfaces, AVI2004, May 25, Gallipoli, Italy. [PDF]
- Pederson, T. (2004). Designing for Physical-Virtual Activities. Workshop on Computer Support for Human Tasks and Activities, PERVASIVE2004, April 20, Vienna, Austria. [PDF]
- Pederson, T. (2003). Towards a Unified Model of Simple Physical and Virtual Environments. In Proceedings of HCI International 2003, Lawrence Erlbaum, 1096-1100. [PDF]
- Pederson, T. (2001). Physical-Virtual Knowledge Work Environments – First Steps. In Proceedings of HCI International 2001, Lawrence Erlbaum, 693-697. [PDF]
- Pederson, T. (2001). Object Location Modeling in Office Environments – First Steps. Workshop on Location Modeling for Ubiquitous Computing, UBICOMP 2001, September 30, Atlanta, USA. [PDF]
- Broberg, A., & Pederson, T. (2001). Some Thoughts on Using Context Awareness for Enhancing Knowledge Work Environments. Workshop on User Modeling for Context-Aware Applications, UM2001, July 13, Sonthofen, Germany. [PDF]
- Pederson, T. (2000). Magic Touch: A Simple Object Location Tracking System Enabling the Development of Physical-Virtual Artefacts in Office Environments. Workshop on Situated Interaction in Ubiquitous Computing, CHI2000, April 3, The Hague, The Netherlands. [PDF]
- Milrad, M., Broberg, A., & Pederson, T. (1999). Challenges for Design: Seeing Learners as Knowledge Workers Acting in Physical-Virtual Environments. *Journal of Courseware Engineering*, 2:22-33. [PDF]
- Pederson, T. (1999). Physical-Virtual instead of Physical or Virtual – Designing Artefacts for Future Knowledge Work Environments. In Proceedings of HCI International'99, Lawrence Erlbaum, 1070-1074. [PDF]

Technical reports

- Pederson, T. Surie, D. (2008). A Situative Space Model for Multimodal Interaction. Presented at NordiCHI2008 workshop on Future Mobile Experiences. Umeå University technical report UMINF 08.11, 5 pages. <http://www.cs.umu.se/research/uminf/index.cgi?year=2008&number=11> [PDF]
- Surie, D., Pederson, T., Lagriffoul, F., Janlert, L. E., Sjölie, D. (2007). Activity Recognition using an Egocentric Perspective of Everyday Objects. Umeå University technical report UMINF-107.01, 2007, 15 pages. <http://www.cs.umu.se/research/reports/show.cgi?year=2007&nr=001> [PDF]
- Pederson, T. (2003). From Conceptual Links to Causal Relations – Physical-Virtual Artefacts in Mixed-Reality Space. PhD thesis, Dept. of Computing Science, Umeå university, report UMINF-03.14, ISSN 0348-0542, ISBN 91-7305-556-5. Permanent URL: <http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-137> [PDF]
- Pederson, T. (1999). Integrating Physical and Virtual Knowledge Work Environments using Physical-Virtual Artefacts – A Proposal. Umeå University report UMINF 99.15. <http://www.cs.umu.se/research/reports/show.cgi?year=1999&nr=015> [PDF]

Pederson, T. (1997). A Cup of Tea & a Piece of Cake – Integration of Virtual Information Workspaces Inspired by the Way We May Think. MSc thesis, Ericsson Media Lab. Umeå University report UMNAD 182.97. [[PDF](#)] [[movie clip 57MB](#)]