

List of Publications

Rakkolainen, Ismo Kalevi. October 10, 2018.

Articles in refereed international journals and books

1. Rakkolainen, I., Vainio, T., A 3D City Info for Mobile Users. Computers & Graphics, Special Issue on Multimedia Appliances, Vol. 25, No. 4. Elsevier 2001. 619-625. (Cited: 181. Source: Google Scholar).
2. DiVerdi, S., Olwal, A., Rakkolainen, I., Höllerer, T., An Immaterial Pseudo-3D Display with 3D Interaction. A book Chapter in "Three-Dimensional Television: Capture, Transmission, and Display". Ozaktas, H., Onural L. (Eds). Springer, Heidelberg, Dec. 2007. 505-528.
3. Benzie, P., Watson, J., Surman, J., Rakkolainen, I., Hopf, K., Urey, H., Sainov, V., von Kopylow, C., A Survey of 3DTV Displays: Techniques and Technologies. IEEE Transactions on Circuits and Systems for Video Technology, special issue on Multi-view Coding and 3DTV. Vol. 17, No. 11, 1647-1658. IEEE November 2007. (Cited: 241).
4. Rakkolainen, I., Höllerer, T., DiVerdi, S., Olwal, A., Mid-air Display Experiments to Create Novel User Interfaces. Multimedia Tools and Applications, Special issue on Semantic Ambient Media Experience, Vol. 44, Issue 3. Springer Netherlands, 2009. 389-405. (Cited: 18).
5. Rakkolainen, I., Jumisko-Pyykkö, S., The Mid-air FogScreen and User Experiences. A book Chapter in "Handbook of Research on Practices and Outcomes in Virtual Worlds and Environments". Yang, H., Yuen, S. (Eds.), IGI Global, Hershey, PA, USA, July 2011. 650-664.
6. Rakkolainen, I., Pseudo-Volumetric 3D Display Solutions. A book Chapter (9.4.2) in "Handbook of Visual Display Technology". Chen, J., Cranton, W., Fihn, M. (Eds.), Springer-Verlag, Heidelberg, Germany, December 2011. 1933-1941. (Reprinted also in 3rd Dimension Newsletter, Veritas et Visus, Vol. 7, No. 7, August 2012.)
7. Rakkolainen, I., Sand, A., Palovuori, K., Mid-Air User Interfaces Employing Particle Screens. IEEE Computer Graphics and Applications, Vol. 35, No. 2 (March/April) 2015. 96-102.
8. Palovuori, K., Rakkolainen, I., Improved Interaction for Mid-Air Projection Screen Technology. A book Chapter in "Handbook of Research on Interactive Information Quality in Expanding Social Network Communications". Cipolla-Ficarra, F. (Ed.), IGI Global, Hershey, PA, USA, 2015. 84-103.
9. Rakkolainen, I., Pseudo-Volumetric 3D Display Solutions. A book Chapter (Part XLI) in "Handbook of Visual Display Technology", 2nd Edition. Chen, J., Cranton, W., Fihn, M. (Eds.), Springer International Publishing, Switzerland, 2016. 2689-2698. DOI 10.1007/978-3-319-14346-0.

Articles in refereed international conference proceedings and compilation works

10. Koskelainen, P., Rakkolainen, I., Soininen, R., Suvanto, J., SISU - Schools to Information Superhighway. In Global Information Infrastructure (GII) Evolution, S. Rao et al. (Eds.), Interworking Issues. IOS Press 1996. 651-654.
11. Koskelainen, P., Rakkolainen, I., Soininen, R., Suvanto, J., ATM-based Multimedia Trial in Comprehensive Schools. Telematics for Future Education and Training: Proceedings of the EAEEIE'96 7th annual Conference. Oulu, Finland, June 12-14, 1996. 23-25.
12. Husberg, F., Blomqvist, M., Visala, K., Niskanen, M., Rakkolainen, I., Shared Platform Independent VRML Worlds. Proceedings of the ISMCR 97 Conference. Tampere, Finland, June 3-4, 1997. 146-151.
13. Hoppenot, Y., Rakkolainen, I., Real Virtuality - Bringing Position Data into VRML Worlds. Proc. of the Second Tampere Int'l Conf. on Machine Automation (ICMA'98). Tampere, Finland, September 15-18, 1998. 579-586.
14. Rakkolainen, I., Pulkkinen, S., Heinonen, A., Visualizing Real-time GPS Data with Internet's VRML Worlds. Proceedings of the ACM-GIS'98 workshop. Washington D.C., USA, November 6-7, 1998. 52-56. (cited: 21).
15. Jomppanen, J., Rintanen, M., Rakkolainen, I., Teleoperated Teamwork over Internet Using VRML. Proceedings of the International Conference on Visual Computing'99. Goa, India, February 23-26, 1999. 304-310.
16. Heinonen, A., Pulkkinen, S., Rakkolainen, I., An Information Database for VRML Cities. Proceedings of the IEEE Information Visualization 2000 Conference. London, England, July 19-21, 2000. 469-473. (Cited: 25).
17. Rakkolainen, I., Timmerheid, J., Vainio, T., A 3D City Info for Mobile Users. Proceedings of the 3rd International Workshop on Intelligent Interactive Assistance and Mobile Multimedia Computing (IMC'2000). Rostock, Germany, November 9-10, 2000. 115-121.
18. Kupila, H., Majahalme, T., Salmenperä, H., Rakkolainen, I., Improving GPS Accuracy for a Mobile 3D City Guide. Proceedings of the 4th International Symposium on Multi-Dimensional Mobile Communications (MDMC'01). Pori, Finland, June 11-12, 2001.
19. Rakkolainen, I., Vainio, T., Kupila, H., Majahalme, T., Salmenperä, H., A GPS-based Mobile 3D City Guide. Proceedings of the 5th World Multi-Conference on Systemics, Cybernetics and Informatics (SCI'2001), session on wearable computing. Orlando, FL, USA, July 22-25, 2001. 485-489.

20. Rakkolainen, I., Palovuori, K., A Walk-thru Screen. IS&T/Spie Electronic Imaging 2002, Proceedings of Conference on Projection Displays VIII. San Jose, CA, USA, January 23-24, 2002. 17-22. (Cited: 35).
21. Rakkolainen, I., Palovuori, K., WAVE – A Walk-thru Virtual Environment. CD Proceedings of the 6th Immersive Projection Technology Symposium in association with IEEE Virtual Reality 2002 Conference. Orlando, FL, USA, March 24-25, 2002. (Cited: 12).
22. Vainio, T., Kotala, O., Rakkolainen, I., Kupila, H., Connecting a Three-dimensional City Model, a Map and a Database to an Information System for Mobile Users. Proceedings of the 2nd IASTED International Conference on Visualization, Imaging and Image Processing (VIIP 2002). Malaga, Spain, September 9-12, 2002. 151-155.
23. Vainio, T., Kotala, O., Rakkolainen, I., Kupila, H., Towards Scalable User Interfaces in 3D City Information Systems. Proceedings of the Fourth International Symposium on Human Computer Interaction with Mobile Devices (Mobile HCI 2002). Pisa, Italy, September 18-20, 2002. 354-358. Published also as a book Chapter in Lecture Notes in Computer Science, Springer Berlin / Heidelberg, Volume 2411/2002. (Cited: 12).
24. Rakkolainen, I., MobiVR - A Novel User Interface Concept for Mobile Computing. Proceedings of the 4th International Workshop on Mobile Computing (IMC'2003). Rostock, Germany, June 17-18, 2003. 107-112. (Cited: 18).
25. Rakkolainen, I., Palovuori, K., FogScreen – An Immaterial, Interactive Screen. Society for Information Displays (SID 2005). Invited paper. Boston, USA, May 22-27, 2005. 102-105.
26. Rakkolainen, I., Palovuori, K., Laser Scanning for the Interactive Walk-Through FogScreen. ACM Symp. on Virtual Reality Software and Technology (VRST 2005). Monterey, CA, USA, Nov. 7-9, 2005. 224-226. (Cited: 21).
27. DiVerdi, S., Rakkolainen, I., Höllerer, T., Olwal, A., A Novel Walk-through 3D Display. SPIE Electronic Imaging, Stereoscopic Displays and Virtual Reality Sys. XIII, Vol. 6055. San Jose, CA, USA, Jan. 16-19, 2006. 1-10. (Cited: 48).
28. Fleck, S., Busch, F., Biber, P., Straßer, W., Rakkolainen, I., DiVerdi, S., Höllerer, T., 3DTV – Panoramic 3D Model Acquisition and its 3D Visualization on the Interactive FogScreen. The International Conference on Image Processing (ICIP) 2006. Atlanta, GA, USA, October 8-11, 2006.
29. Rakkolainen, I., Erdem, T., Erdem, Ç., Özkan, M., Laitinen, M., Interactive “Immaterial” Screen for Performing Arts. ACM Multimedia 2006, Interactive Arts Program. Santa Barbara, CA, USA, October 23-27, 2006. 185-188.
30. Rakkolainen, I., Tracking Users through a Projection Screen. ACM Multimedia 2006. Santa Barbara, CA, USA, October 23-27, 2006. 101-104.
31. Rakkolainen, I., Erdem, T., Utku, B., Erdem, Ç., Özkan, M., Mid-air Display for Physical Exercise and Gaming. IEEE 3DTV Conference. Kos, Greece, May 7-9, 2007.
32. Rakkolainen, I., Lugmayr, A., Immaterial Display for Interactive Advertisements. ACM Conference on Advances in Computer Entertainment Technology. Salzburg, Austria, June 13-15, 2007. 95-98. (Cited: 24).
33. Rakkolainen, I., How Feasible Are Star Wars Mid-air Displays? 11th International Conference on Information Visualization (IV'07). Zurich, Switzerland, July 4-6, 2007. 935-942. (Cited: 18).
34. Olwal, A., DiVerdi, S., Rakkolainen, I., Höllerer, T., Consigalo: Multi-user, Face-to-face Interaction on an Immaterial Display with Adaptive Audio. Second International Conference on INtelligent TEchnologies for interactive ENTAINment (INTETAIN) 2008. Playa del Carmen, Cancun, Mexico, January 8-10, 2008. (Cited: 13).
35. Rakkolainen, I., Measurements and Experiments of Immaterial Virtual Reality Display. The 2nd IEEE 3DTV Conference. Istanbul, Turkey, May 28-30, 2008. 37-40.
36. Jumisko-Pyykkö, S., Hellsten, S., Weitzel, M., Rakkolainen, I., Children's Game Experiences in Different Settings. The 2nd IEEE 3DTV Conference. Istanbul, Turkey, May 28-30, 2008. 377-380.
37. Jumisko-Pyykkö, S., Weitzel, M., Rakkolainen, I., Biting, Whirling, Crawling – Children's Embodied Interaction with Walk-through Displays. The 12th IFIP conference on Human-Computer Interaction: INTERACT 2009. Uppsala, Sweden, August 24-28, 2009. 123-136.
38. Rakkolainen, I., Feasible Mid-air Virtual Reality with the Immaterial Projection Screen Technology. The 4th IEEE 3DTV Conference. Tampere, Finland, June 7-9, 2010. 1-4.
39. Palovuori, K., Rakkolainen, I., The Vanishing Display – An Autovisible Immaterial Display. MindTrek Academic Conference 2012, Tampere, Finland, October 3-5, 2012. 175-177.
40. Palovuori, K., Rakkolainen, I., Improved Virtual Reality for Mid-Air Projection Screen Technology. Third International Symposium on Communicability, Computer Graphics and Innovative Design for Interactive Systems (CCGIDIS 2013), Venice, Italy, April 23-24, 2013. 25-33.
41. Palovuori, K., Rakkolainen, I., Ballistic Tracking - A True Zero Latency Gaming Interface. 17th International Academic MindTrek Conference 2013, Tampere, Finland, October 1-4, 2013. 258-260.
42. Turunen, M., Raisamo, R., Olsson, T., Hella, T., Miettinen, T., Heimonen, T., Hakulinen, J., Rakkolainen, I., Enhancing the Conference Experience with a Multi-Device, Multimodal, Multi-User Program Guide. 17th International Academic MindTrek Conference 2013, Tampere, Finland, October 1-4, 2013. 5-8.

43. Rakkolainen, I., Palovuori, K., A Fluorescent Mid-Air Screen. IEEE International Symposium on Multimedia (ISM 2013). Anaheim, CA, USA, December 9-11, 2013. 25-29.
44. Sand, A., Rakkolainen, I., A Hand-held Immaterial Volumetric Display. SPIE Electronic Imaging, Stereoscopic Displays and Applications XXV, Vol. 9011. San Francisco, CA, USA, Feb. 2-6, 2014.
45. Palovuori, K., Rakkolainen, I., Sand, A., Bidirectional Touch Interaction for Immaterial Displays. 18th International Academic MindTrek Conference 2014, Tampere, Finland, November 4-7, 2014. 76-78.
46. Palovuori, K., Rakkolainen, I., The Heat Is On – Thermal Input for Immaterial Interaction. 19th International Academic MindTrek Conference 2015, Tampere, Finland, September 22-24, 2015. 152-154.
47. Sand, A., Rakkolainen, I., Palovuori, K., Isokoski, P., Kangas, J., Raisamo, R., Head-Mounted Display with Mid-Air Tactile Feedback. The 21st ACM Symposium on Virtual Reality Software and Technology (VRST 2015), Beijing, China, November 13-15, 2015. 51-58. (Cited: 17).
48. Rakkolainen, I., Raisamo, R., Turk, M., Höllerer, T., Palovuori, K., Casual Immersive Viewing with Smartphones. 20th International Academic Mindtrek Conference 2016, Tampere, Finland, October 17-19, 2016. 449-452.
49. Rakkolainen, I., Turk, M., Höllerer, T., A Superwide-FOV Optical Design for Head-Mounted Displays. Joint 26th International Conference on Artificial Reality and Telexistence & the 21th Eurographics Symposium on Virtual Environments (ICAT-EGVE 2016), Little Rock, AR, USA, December 7-9, 2016. Short paper. 45-48.
50. Rakkolainen, I., Raisamo, R., Turk, M., Höllerer, T., Palovuori, K., Extreme Field-of-View for Head-Mounted Displays. 11th 3DTV-CON Conference 2017, Copenhagen, Denmark, June 7-9, 2017. 227-230.

Articles in refereed international workshops

51. Rakkolainen, I., Mobile 3D City Info. Proceedings of the Workshop on the Future of VR and AR Interfaces, IEEE Virtual Reality 2001 Conference. March 14, 2001, Yokohama, Japan. 31-32.
52. Rakkolainen, I., 3D City Info – a Near-future Application of 4G Services. Proceedings of the second Wireless World Research Forum (WWRF), Helsinki, Finland, May 10-11, 2001.
53. Rakkolainen, I., Novel Applications for Mobile 3D Graphics. YoungVR'2001 Workshop. Taejeon, South Korea, December 18-20, 2001.
54. Koskela, T., Vilpola, I., Rakkolainen, I., User Requirements for Large Virtual Display and Finger Pointing Input for Mobile Devices. 2nd International Conference on Mobile and Ubiquitous Multimedia 2003, Workshop on Designing for Ubicomp in the Wild. Norrköping, Sweden, December 10, 2003.
55. Rakkolainen, I., Mid-air Displays Enabling Novel User Interfaces. Invited paper. Semantic Ambient Media Experience workshop, ACM Multimedia 2008 Conference. Vancouver, Canada, October 31, 2008. 25-30. (Cited: 11).
56. Neri, M., Campi, A., Suffritti, R., Grimaccia, F., Sinogas, P., Guye, O., Papin, C., Michalareas, T., Gazdag, L., Rakkolainen, I. SkyMedia – UAV-based Capturing of HD / 3D Content with WSN Augmentation for Immersive Media Experiences. HotMD 2011, held in conjunction with IEEE ICME 2011. Barcelona, Spain. July 11, 2011. (cited: 19)
57. Rakkolainen, I., Sand, A., Palovuori, K., Walk-through Mixed Reality Displays. CHI 2013 Workshop on Future Interactive Surfaces. Paris, France, April 28, 2013. 4 pages.
58. Sand, A., Rakkolainen, I., Isokoski, P., Raisamo, R., Palovuori, K., Lightweight Immaterial Particle Displays with Mid-Air Tactile Feedback. IEEE International Workshop on Haptic Audio-Visual Environments and Games 2015, Ottawa, Canada, October 11-12, 2015. 30-34.
59. Rakkolainen, I., Raisamo, R., Palovuori, K., Mid-Air Tactile Feedback with Mid-Air Displays and Head-Mounted Displays. ACM CHI 2016 Workshop on Mid-Air Haptics and Displays: Systems for Un-instrumented Mid-Air Interactions. San Jose, CA, USA, May 8, 2016.

Abstracts & posters in refereed international conferences

60. Rakkolainen, I., Landkammer, J., Piirto, M., Palovuori, K., The Walk-thru Fog Screen Experience. A demonstration & abstract at ACM SIGGRAPH 2003 Program: Emerging Technologies. San Diego, CA, USA, July 27-31, 2003. 110.
61. Rakkolainen, I., Palovuori, K., Interactive, Immaterial FogScreen (poster). ACM User Interface and Software Technology (UIST) Symposium 2004, Santa Fe, NM, USA, October 24-27, 2004.
62. Fleck, S., Piirto, M., Rakkolainen, I., Laser-scanning for the Interactive walk-through FogScreen (poster). Proceedings of the 9th International Conference on Information Visualisation, Symposium on Human-Computer Interaction for Information Visualization. London, England, July 6-8, 2005.
63. Rakkolainen, I., DiVerdi, S., Olwal, A., Candussi, N., Höllerer, T., Laitinen, M., Piirto, M., Palovuori, K., The Interactive FogScreen. A demonstration and associated abstract at ACM SIGGRAPH 2005 Program: Emerging Technologies. Los Angeles, CA, USA, July 31-August 4, 2005. 127. (Cited: 54).
64. Olwal, A., DiVerdi, S., Candussi, N., Rakkolainen, I., Höllerer, T., An Immaterial, Dual-sided Display System with 3D Interaction (poster). IEEE VR 2006. Washington, D.C., USA, March 25-29, 2006. 279-280. (Cited: 18)

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66. Sand, A., Rakkolainen, I., Mixed Reality with Multimodal Head-mounted Pico Projector. Laval Virtual 2013, Laval, France, March 20-24, 2013. Article 14. DOI: 10.1145/2466816.2466831.
67. Rakkolainen, I., Sand, A., A Movable Immaterial Volumetric Display. ACM SIGGRAPH Asia 2013, Posters. Hong Kong, November 19-22, 2013. Article 2.
68. Rakkolainen, I., Sand, A., Palovuori, K., Mid-Air Displays for Mobile Computing. The 15th International Workshop on Mobile Computing Systems and Applications (ACM HotMobile 2014), Posters. Santa Barbara, CA, USA, February 26-27, 2014.
69. Rakkolainen, I., Sand, A., Palovuori, K., Mid-Air Tactile Warning System. 20th International Academic Mindtrek Conference 2016, Tampere, Finland, October 17-19, 2016. Work-in-progress poster.
70. Rakkolainen, I., Turk, M., Höllerer, T., A Compact, Wide-FOV Optical Design for Head-Mounted Displays. The 22nd ACM Symposium on Virtual Reality Software and Technology (VRST 2016), Munich, Germany, November 2-4, 2016. Poster paper, 293-294.
71. Pakkanen, T., Hakulinen, J., Jokela, T., Rakkolainen, I., Kangas, J., Piippo, P., Raisamo, R., Salmimaa, M. Interaction with WebVR 360° Videoplayer - Comparing Three Interaction Paradigms. IEEE VR 2017, Los Angeles, CA, USA, March 18-22, 2017. Poster paper.
72. Rakkolainen, I., Raisamo, R., Turk, M., Höllerer, T., Field-of-View Extension for VR Viewers. 21st International Academic Mindtrek Conference 2017, Tampere, Finland, September 20-21, 2017. Poster paper, 227-230.
73. Koskinen, E., Rakkolainen, I., Raisamo, R., Direct Retinal Signals for Virtual Environments. The 23rd ACM Symp. on Virtual Reality Software and Technology (VRST 2017), Gothenburg, Sweden, November 8-10, 2017. Article 55.
74. Rakkolainen, I., Raisamo, R., Turk, M., Höllerer, T., Illumination for 360 Degree Cameras. The 24th ACM Symp. on Virtual Reality Software and Technology (VRST 2018), Tokyo, Japan, November 28 - December 1, 2018. Accepted.
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Articles in refereed Finnish conference proceedings

76. Jomppanen, J., Rintanen, M., Korhonen, S., Rakkolainen, I., A Teleoperation Application with VRML and HMD. Proceedings of the FINSIG'99 Conference. Oulu, Finland, May 31, 1999. 204-208.

Non-refereed scientific articles

77. Rakkolainen, I., Verkotetut virtuaaliympäristöt, Keynote lecture on KAMU-seminar Multimedian uudet ulottuvuudet. 26.-27.11.1997, Finlandia-talo, Helsinki, Finland. 199-202.
78. Rakkolainen, I., Virtuaalitodellisuuden hyötysovellukset. In Avautuminen tietoyhteiskuntaan, Varis, T. (ed.), Tampereen yliopiston täydennyskoulutuskeskus, Julkaisusarja A 1/98. 84-86.
79. Rakkolainen, I., A Walk-Thru Fog Screen for Museums. Nordic Digital Excellence in Museums (NODEM'2003). Helsingborg, Sweden, March 17-19, 2003.
80. Pulli, P., Rakkolainen, I., Vanhala, J., Takala, T., Karioja, P., Personal Access and User Interface for Multi-modal Broadband Telecommunication (PAULA). ELECTRONICS Research Programme Final Report. Academy of Finland 2004. ISBN 951-715-508-5.
81. Rakkolainen, I., A Section in an internal State-of-the-Art Report on "3D Displays", EU's Network of Excellence "3D TV", September 2005.
82. Rakkolainen, I., A Section in an internal State-of-the-Art Report on "Applications of 3D TV Technology", EU's Network of Excellence "3D TV", September 2005.
83. Contribution to H. Ozaktas, Three-dimensional Television: Consumer, Social, and Gender Issues. A book Chapter on "Three-Dimensional Television: Capture, Transmission, and Display." Editors: H. Ozaktas and L. Onural. Springer, Heidelberg, 2007. 601-631.
84. Lappalainen, Y., Rakkolainen, I., Korkalainen, T., Okkonen, J., Mäkilä, T., Pääskylä, J., Lehtonen, T., Lakkala, M., Tulevaisuudennäkymiä. In Lappalainen, Y., Poikolainen M. & Trapp H. (ed.), Tila haltuun! Suositukset virtuaalisen suomen opiskelun toteuttamiseen. Turun yliopiston Brahea-keskuksen julkaisu 6, 2015. <http://tribe.accedor.fi/3dsuomi>

Scientific monographs

85. Rakkolainen, I., Novel Applications and Methods for Virtual Reality, PhD Thesis, Tampere University of Technology, published on November 29th, 2002.

Publications intended for professional communities (invited talks)

The Walk-thru FogScreen Experience. ACM Siggraph 2003 Emerging Tech., San Diego, CA, USA, July 27-31, 2003.
The Walk-thru Fog Screen. Information Society Models and the New Everyday Life Conference, Waseda University, Tokyo, Japan, October 6-7, 2003.
The Interactive 3D FogScreen. Displays for Immersive Education and Training Workshop. Institute for Creative Technologies, University of Southern California, Marina del Rey, CA, USA, October 24-25, 2005.
New developments with the Interactive 3D FogScreen. Touch Gesture Motion Conference 2012, Austin, TX, USA, December 12-13, 2012.

Publications intended for the general public, linked to the applicant's research

Rakkolainen, I., Virtuaalitodellisuus - Hypeä vai hyötykäyttöä? Tietoyhteys 2/98. 5-6.
Rakkolainen, I., Siggraph Asia 2013 konferenssi. SeOppi-magazine 1/2014.
Rakkolainen, I., Virtual Reality Has Tailwind – for a Reason. In Digital Age. Kaute Foundation's 60th anniversary publication, November 2016.

Public artistic and design activities (research demonstrations)

1. Homo Mobilis-exhibition, Sep 16 - Oct 18, 1998, Museum of Art and Design, Helsinki, Finland.
 2. Demo Night, VRML'99 Conference, February 23-26, 1999, Paderborn, Germany.
 3. IEEE Virtual Reality 2001 research demonstration, March 15-16, 2001, Yokohama, Japan.
 4. Finnish Science Fair, FogScreen demonstration, October 4-6, 2002, Turku, Finland.
 5. ACM SIGGRAPH 2003 Emerging Tech., FogScreen demo, July 27-31 2003, San Diego, CA, USA.
 6. Conference on Information Society, FogScreen demo, Oct. 6-7, 2003, Waseda Univ., Tokyo, Japan.
 7. April Spring Friendship Art Festival, FogScreen demo, April 10-18, 2004, Pyongyang, North Korea.
 8. Wired Magazine's NextFest 2004, FogScreen demo, May 14-16, 2004, San Francisco, USA.
 9. Wired Magazine's NextFest 2005, FogScreen demo, June 24-26, 2005, Chicago, IL, USA.
 10. ACM SIGGRAPH 2005 Emerging Tech., Interactive FogScreen demo, Jul 31-Aug. 4, 2005, Los Angeles, CA, USA.
 11. EU's IST 2006 event, November 2006. Helsinki, Finland.
- The FogScreens are also installed to numerous world-class museums, theme parks, exhibitions and events world-wide.

Theses

Rakkolainen, I., Radiositeettimenetelmän toteutus (Implementation of Radiosity Method), Master's Thesis, University of Helsinki 1990.
Rakkolainen, I., Visualizing Reality with Web3D, Licentiate Thesis, Tampere University of Technology, June 2000.
Rakkolainen, I., Novel Applications and Methods for Virtual Reality, PhD Thesis, Tampere University of Technology, published on November 29th, 2002.

Patents

1. Rakkolainen, I., Method and apparatus for acquiring a three-dimensional model of a physical object. Finnish patent FI 112823 B. Jan. 15, 2004.
2. Palovuori, K., Rakkolainen, I., Method and apparatus for forming a projection screen. Finnish patent FI 114878. Jan. 14, 2005.
3. Rakkolainen, I., Method and apparatus for collecting and connecting light into a fiber optic bundle. Finnish patent FI 116639. Jan. 13, 2006.
4. Rakkolainen, I., Method and apparatus for tracking through a projection screen. Finnish patent 117307. Aug. 31, 2006.
5. Rakkolainen, I., Volumetric fluorescent screen. Invention disclosure 21.5.2013, University of Tampere.
6. Rakkolainen, I., Wide field-of-view display. Finnish patent application, filed on 4.7.2016.
7. Rakkolainen, I., Peripheral HMD Rendering with Lasers. Invention disclosure 27.9.2016. University of Tampere.

International patents

Palovuori, K., Rakkolainen, I., Method and apparatus for forming a projection screen or a projection volume.
U.S. patent 6,819,487, November 16, 2004. European patent 1362260, Russian patent RU2278405, Japanese Patent 4125123, Indian, Australian, Canadian and other patents for the same. (US patent cited: 48).
Rakkolainen, I., Display screen based on particles carried in a fluid stream. PCT/FI2007/ 050364. A PCT patent application filed in 15.6.2007.
Horppu, M., Laitinen, M., Rakkolainen, I., Palovuori, K., Al Take, M., Jaatinen, J. Humidifier and method for humidifying air. WO 2018 / 115581 A1, PCT patent application.