

EELKE FOLMER - CV

University of Nevada
Computer Science
me@eelke.com

EDUCATION

- 2005 **PhD, Computer Science**, University of Groningen, The Netherlands.
Area: Software Engineering/Human Computer Interaction; Advisor: Jan Bosch.
Thesis: Software Architecture Analysis of Usability.
- 2001 **MS, Technical Computer Science**, University of Groningen, The Netherlands.
Area: Software Engineering, Databases; Advisor: Ben Spaanenburg and Frits Greuter
Thesis: Distributed Database Performance for the Tetranode System.

EMPLOYMENT

- 2018-today **Professor and Chair**. During my tenure as department chair, I spearheaded numerous initiatives that significantly advanced our department's research, education, and overall growth. Our annual average research awards saw a remarkable increase, rising from \$2.5 million in 2018 to \$6.5 million in 2022. This growth was driven by a focus on high-quality research, which enabled four faculty members to secure prestigious NSF CAREER awards. Additionally, I successfully secured space in the new Pennington Engineering building, effectively doubling our department's research capacity. Under my leadership, the department achieved top 30 rankings in both robotics and high-performance computing on csrankings.org. I managed a team of up to 27 faculty members and three administrative staff, while also acquiring five new faculty lines. To support and retain talent, I increased salaries and arranged competitive retention packages. I also oversaw ten tenure and/or promotion applications, all of which were successful. On the academic front, I launched an online MS program in Cybersecurity, which now enrolls 40 students, and played a key role in establishing a BS in Computational Linguistics, which debuted in 2023 with 7 students. The undergraduate student body grew from 742 to 965, while the graduate student population expanded from 111 to 152, including 69 PhD students. To enhance educational offerings, I increased the availability of summer courses and provided additional Teaching Assistant (TA) support for labs. These efforts contributed to a 5% improvement in the 4-year graduation rate and boosted student retention. Through strategic fundraising, I secured scholarships for students and garnered support for capstone courses from local industry partners. I also obtained a \$600,000 gift to establish a Robotics Research Center and develop an MS program in Robotics. Furthermore, I coordinated efforts that led to the successful renewal of ABET accreditation for our undergraduate program in the fall of 2023. These accomplishments reflect my commitment to advancing the department's mission and fostering a culture of excellence in research, education, and innovation.
- 2016-2018 **Associate Professor and Graduate Director (2016-2018)**. As Graduate Director, I implemented strategic initiatives that enhanced both the quantity and quality of graduate applicants. My efforts included proactively reaching out to prospective students by leveraging GRE email lists targeted at specific countries in Asia and Africa to promote our programs. I authored a comprehensive graduate handbook and revamped the MS curriculum by reducing credit requirements for coursework-only degrees, ensuring better alignment with industry demands. These changes contributed to a significant increase in graduate enrollment, rising from 85 to 111 students.
- 2016-2018 **CEO**, VRmersive - Sold ~1,000 copies of a [walk-in-place](#) plugin for Unity.
- 2014 **Visiting Scientist**, Google Research, Mountain View. Worked on [Project Tango](#) & [Cardboard](#).
- 2006-2012 **Assistant Professor**, Department of Computer Science and Engineering, University of Nevada.
- 2005-2006 **Postdoctoral Fellow**, Department of Computer Science, University of Alberta, Edmonton.
- 2001-2005 **Graduate Research Assistant**, Department of CS, University of Groningen.
- 2000-2001 **Research Interns**, Rohill Technologies, Hoogeveen.
- 1998-2000 **Part-time Software Engineer**, Notenbomer Internet Center, Groningen.

RESEARCH METRICS

Publications	Impact*	Funding	Mentoring	Courses taught
Total pubs: 91	citations: 5,957	Total # grants: 22	PhD:8	Graduate:4
Journals: 22	h-index: 38	PI/PD: \$3,075k	MS: 18	Undergrad:37
Conference: 54	i10-index: 68	Co-PI: \$655k		New courses :6
Book chapter:3	Avg cites pp: 65	Avg award: \$144k		Avg Eval: 3.2/4

*Retrieved with [Google Scholar](#) on February 5, 2025.

FUNDING

2022-2027	National Institutes of Health , COBRE: Center for Integrative Neuroscience: Virtual Reality and Augmented Reality Core, Phase III, award #5P20GM103650 to Eelke Folmer (PD) \$491,486
2019-2023	National Science Foundation , CHS: Small: Towards Accommodating Sex Differences in VR Sickness, award #1911041 to Eelke Folmer (PI) and Paul MacNeilage (Co-PI) \$499,785
2019-2022	National Science Foundation , IGE: Enhancing Diversity by Changing Institutional Culture and Scaffolding Student Success, award to David Zeh (PI) and Karla Wagner, Bridget Walsh, Matthew Forister and Eelke Folmer (Co-PI) \$499,926
2018-2019	Google Research Award , Understanding Gender Differences in Visual/Vestibular Conflict during Virtual Locomotion, award to Eelke Folmer (PI) and Paul MacNeilage (Co-PI) \$44,044
2017-2022	National Institute of Health , COBRE: Center for Integrative Neuroscience: Virtual Reality and Augmented Reality Core, award #5P20GM103650 to Eelke Folmer (PD) \$655,380
2017-2018	NASA EPSCOR , Underwater Virtual Reality for Zero-G Training, Award to Paul MacNeilage (PI) and Eelke Folmer (Co-PI) \$30,000
2017-2018	UNR VPRI Scholarly Endeavors Grant , Impacts of Exergaming on Children's Motivation and Physical Activity, Award to You Fu (PI) and Eelke Folmer (CO-PI) \$2,500
2017-2018	Mozilla Foundation , Understanding Gender Differences in VR sickness, Award to Eelke Folmer (PI) and Paul MacNeilage (Co-PI) \$34,156
2016-2017	InfoSys Foundation , SimViz: a visual impairment simulation tool for iOS, Award to Eelke Folmer (PI) \$10,000
2016-2017	Nevada Advanced Autonomous Systems Innovation Center , Sensing Environmental Change in Freshwater Ecosystems via the Development of Autonomous Water Vehicles, Award to Sudeep Chandra (PI), Kostas Alexis (Co-PI), Eelke Folmer (Co-PI) \$10,000
2015-2016	National Science Foundation , WORKSHOP: Doctoral Consortium at ASSETS 2015, Award to Eelke Folmer (PI) \$22,854
2014-2015	Partners for Sight Foundation , Navatar: An Indoor Navigation System for Users who are Blind, Award to Eelke Folmer (PI) \$150,000
2014-2015	National Science Foundation , EAGER: Guide Drones for Blind Athletes, CHS Award #1445380 to Eelke Folmer (PI) \$72,080
2014-2015	Nevada Advanced Autonomous Systems Innovation Center , Navatar-App: Ubiquitous Indoor Navigation for Users who are Blind, Award to Eelke Folmer (PI) \$15,000
2013-2014	Google Research , An Indoor Navigation System for Blind Users using Google Glass, Google Research Award to Eelke Folmer (PI) \$40,208
2013-2014	Microsoft Research , ASK: An Assistive Spatial Knowledge Navigator for Users who are Blind, Software Engineering Innovation Foundation Award to Eelke Folmer (PI) \$25,000
2012-2015	National Science Foundation , Proprioceptive Displays to Engage Blind Users into Healthy Whole Body Interaction, HCC Award #1118074 to Eelke Folmer (PI) \$410,220
2011-2014	National Science Foundation , TextSL: A Virtual World Interface for Visually Impaired, HCC Award #0917362 to Eelke Folmer (PI) and George Bebis (Co-PI) \$499,332
2007-2009	National Science Foundation , SGER: Developing an Accessible Client for Second Life, HCC Award #0738921 to Eelke Folmer (PI) \$90,488.
2007-2008	Bally Technologies , Exploration of research Directions to Provide Solutions for Improving Quality Assurance at Bally Technologies, Award to Sergiu Dascalu (PI), Eelke Folmer (CO-PI), Bobby Bryant and Murat Yuksel \$112,972

CONFERENCE PAPERS

- [c55] Melanie Schmidt-Wolf, **Eelke Folmer**, and David Feil-Seifer. Comprehensive feedback module comparison for autonomous vehicle-pedestrian communication in virtual reality. In *International Conference on Social Robotics*, pages 410–423, 2023. Springer.
- [c54] Aniruddha Prithul, Jiwan Bhandari, Walker Spurgeon, and **Eelke Folmer**. Evaluation of hands-free teleportation in vr. In *Proceedings of the 2022 ACM Symposium on Spatial User Interaction*, pages 1–6, 2022.
- [c53] Isayas Berhe Adhanom, **Eelke Folmer**, and others. Embodied third-person virtual locomotion using a single depth camera. In *Proceedings of Graphics Interface 2021*, 2021.
- [c52] Aniruddha Prithul and **Eelke Folmer**. Analysis of positional tracking space usage when using teleportation. In *2021 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pages 480–481, 2021. IEEE.
- [c51] Isayas B. Adhanom, Samantha C Lee, **Eelke Folmer**, and Paul MacNeilage. Gazemetrics: An open-source tool for measuring the data quality of HMD-based eye trackers. In *ACM Symposium on Eye Tracking Research and Applications*, pages 1–5, 2020.
- [c50] Isayas Berhe Adhanom, Nathan Navarro Griffin, Paul MacNeilage, and **Eelke Folmer**. The effect of a foveated field-of-view restrictor on VR sickness. In *2020 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*, pages 645–652, 2020. IEEE.
- [c49] Nathan Navarro Griffin and **Eelke Folmer**. Out-of-body locomotion: Vectionless navigation with a continuous avatar representation. Number November, 2019.
- [c48] Majed Al Zayer, Isayas B Adhanom, Paul MacNeilage, and **Eelke Folmer**. The effect of field-of-view restriction on sex bias in VR sickness and spatial navigation performance. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, pages 1–12, 2019.
- [c47] Christian Sinnott, James Liu, Courtney Matera, Savannah Halow, Ann Jones, Matthew Moroz, Jeffrey Mulligan, Michael Crognale, **Eelke Folmer**, and Paul MacNeilage. Underwater virtual reality system for neutral buoyancy training: Development and evaluation. In *25th ACM Symposium on Virtual Reality Software and Technology, VRST '19*, 2019.
- [c46] James Liu, Hirav Parekh, Majed Al-Zayer, and **Eelke Folmer**. Increasing walking in VR using redirected teleportation. In *Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology, UIST '18*, pages 521–529, 2018.
- [c45] Majed Al Zayer and **Eelke Folmer**. Stereotrack: 180-degree low-cost acoustic positional tracking for mobile vr platforms. In *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play Companion Extended Abstracts*, pages 143–154, 2018.
- [c44] Nathan Navarro Griffin, James Liu, and **Eelke Folmer**. Evaluation of handsbusy vs handsfree virtual locomotion. In *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play, CHI PLAY '18*, pages 211–219, 2018.
- [c43] Jiwan Bhandari, Paul MacNeilage, and **Eelke Folmer**. Teleportation without spatial disorientation using optical flow cues. In *Proceedings of Graphics Interface 2018, GI 2018*, pages 162 – 167, 2018.
- [c42] Sam Tregillus, Majed Al Zayer, and **Eelke Folmer**. Handsfree omnidirectional VR navigation using head tilt. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, pages 4063–4068, 2017. ACM.
- [c41] Jiwan Bhandari, Sam Tregillus, and **Eelke Folmer**. Legomotion: Scalable walking-based virtual locomotion. In *Proceedings of the 23rd ACM Symposium on Virtual Reality Software and Technology, VRST '17*, pages 18:1–18:8, 2017.
- [c40] William Grussenmeyer and **Eelke Folmer**. Audiodraw: User preferences in non-visual diagram drawing for touchscreens. In *Proceedings of the 13th Web for All Conference, W4A '16*, pages 22:1–22:8, 2016.
- [c39] Majed Al Zayer, Sam Tregillus, and **Eelke Folmer**. Pawdio: Hand input for mobile VR using acoustic sensing. In *Proceedings of the 2016 Annual Symposium on Computer-Human Interaction in Play, CHI PLAY '16*, pages 154–158, 2016.

- [c38] Majed Al Zayer, Sam Tregillus, Jiwan Bhandari, Dave Feil-Seifer, and **Eelke Folmer**. Exploring the use of a drone to guide blind runners. In Proceedings of the 18th International ACM SIGACCESS Conference on Computers and Accessibility, pages 263–264, 2016. ACM.
- [c37] Sam Tregillus and **Eelke Folmer**. VR-STEP: Walking-in-place using inertial sensing for hands free navigation in mobile VR environments. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, pages 1250–1255, 2016. ACM.
- [c36] Halim Cagri Ates, Alexander Fiannaca, and **Eelke Folmer**. Immersive simulation of visual impairments using a wearable see-through display. In Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction, TEI '15, pages 225–228, 2015.
- [c35] Ilias Apostolopoulos, Daniel S. Coming, and **Eelke Folmer**. Accuracy of pedometry on a head-mounted display. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, CHI '15, pages 2153–2156, 2015.
- [c34] Alexander Fiannaca, Ilias Apostolopoulos, and **Eelke Folmer**. Headlock: A wearable navigation aid that helps blind cane users traverse large open spaces. In Proceedings of the 16th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS), pages 19–26, 2014.
- [c33] Vinitha Khambadkar and **Eelke Folmer**. A tactile-proprioceptive communication aid for users who are deafblind. In Proceedings of Haptics Symposium (HAPTICS), pages 239–245, 2014.
- [c32] Burkey Sucu and **Eelke Folmer**. The blind driver challenge: Steering using haptic cues. In Proceedings of the 16th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS), pages 3–10, 2014.
- [c31] Tony Morelli, Lauren Lieberman, John Foley, and **Eelke Folmer**. An exergame to improve balance in children who are blind. In Proceedings of Foundations of Digital Interactive Games (FDG), 2014.
- [c30] **Eelke Folmer**. Video games for users with visual impairments. In Sri H. Kurniawan and Roberto Manduchi, editors, Assistive Technology for Blindness and Low Vision, 2013.
- [c29] Burkey Sucu and **Eelke Folmer**. Haptic interface for non-visual steering. In Proceedings of the international conference on Intelligent user interfaces (IUI), IUI '13, pages 427–434, 2013.
- [c28] Alexander Fiannaca, Tony Morelli, and **Eelke Folmer**. Haptic target acquisition to enable spatial gestures in nonvisual displays. In Proceedings of the 2013 Graphics Interface Conference (GI), pages 213–219, 2013.
- [c27] Vinitha Khambadkar and **Eelke Folmer**. GIST: a gestural interface for remote nonvisual spatial perception. In Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST), pages 301–310, 2013.
- [c26] Ilias Apostolopoulos, **Eelke Folmer**, and George Bebis. Improving accessibility of virtual worlds by automatic object labeling. In Proceedings of International Symposium on Visual Computing (ISVC), volume of Lecture Notes in Computer Science, pages 254–265, 2013.
- [c25] Miran Kim, Jeff Angermann, George Bebis, and **Eelke Folmer**. Vizical: accurate energy expenditure prediction for playing exergames. In Proceedings of the 26th annual ACM symposium on User interface software and technology, UIST '13, pages 397–404, 2013.
- [c24] Ilias Apostolopoulos, Navid Fallah, **Eelke Folmer**, and Kostas Bekris. Integrated online localization and navigation for people with visual impairments using smart phones. In Proceedings of IEEE International Conference on Robotics and Automation (ICRA), pages 1322 –1329, may 2012.
- [c23] Navid Fallah, Ilias Apostolopoulos, Kostas Bekris, and **Eelke Folmer**. The user as a sensor: navigating users with visual impairments in indoor spaces using tactile landmarks. In Proceedings of the ACM annual conference on Human Factors in Computing Systems (CHI), pages 425–432, 2012.
- [c22] Tony Morelli and **Eelke Folmer**. Twuist: A discrete tactile-proprioceptive display for eye and ear free output on mobile devices. In Proceedings of Haptics Symposium 2012 (HAPTICS'12), pages 443–450, 2012.
- [c21] **Eelke Folmer**. Accessibility. In Mark. Wolf, editor, Encyclopedia of Video Games: The Culture, Technology, and Art of Gaming,, pages 3–5, 2012.
- [c20] Tony Morelli, John Foley, Lauren Lieberman, and **Eelke Folmer**. Pet-n-punch: upper body tactile/audio exergame to engage children with visual impairments into physical activity. In Proceedings of Graphics Interface 2011 (GI'11), pages 223–230, 2011.

- [c19] Tony Morelli and **Eelke Folmer**. Real-time sensory substitution to enable players who are blind to play gesture based videogames. In Proceedings of Foundations of Digital Interactive Games (FDG'11), pages 147–153, 2011.
- [c18] Daniel Ramos and **Eelke Folmer**. Supplemental sonification of a bingo game. In Proceedings of Foundations of Digital Interactive Games (FDG'11), pages 168–173, 2011.
- [c17] Bugra Oktay and **Eelke Folmer**. Syntherella: a feedback synthesizer for efficient exploration of virtual worlds using a screen reader. In Proceedings of Graphics Interface 2011 (GI'11), pages 65–70, 2011.
- [c16] **Eelke Folmer**, Fangzhou Liu, and Barrie Ellis. Navigating a 3D avatar using a single switch. In Proceedings of Foundations of Digital Interactive Games (FDG'11), pages 154–160, 2011.
- [c15] Ilias Apostolopoulos, Navid Fallah, **Eelke Folmer**, and Kostas Bekris. Feasibility of interactive localization and navigation of people with visual impairments. In Proceedings of the 11th IEEE Intelligent Autonomous Systems (IAS), pages 22–32, August 2010.
- [c14] Tony Morelli, John Foley, and **Eelke Folmer**. VI-Bowling: a tactile spatial exergame for individuals with visual impairments. In Proceedings of the 12th international ACM SIGACCESS conference on Computers and accessibility (ASSETS'10), pages 179–186, 2010.
- [c13] Bugra Oktay and **Eelke Folmer**. Textsl: a screen reader accessible interface for second life. In Proceedings of the 2010 International Cross Disciplinary Conference on Web Accessibility (W4A), W4A '10, pages 21:1–21:2, 2010.
- [c12] Bei Yuan, Manjari Sapre, and **Eelke Folmer**. Seek-n-tag: a game for labeling and classifying virtual world objects. In Proceedings of Graphics Interface 2010 (GI'10), pages 201–208, 2010.
- [c11] Tony Morelli, John Foley, Luis Columna, Lauren Lieberman, and **Eelke Folmer**. VI-Tennis: a vibrotactile/audio exergame for players who are visually impaired. In Proceedings of the Fifth International Conference on the Foundations of Digital Games, FDG '10, pages 147–154, 2010.
- [c10] Bugra Oktay and **Eelke Folmer**. Synthesizing meaningful feedback for exploring virtual worlds using a screen reader. In Proceedings of the 28th of the international conference extended abstracts on Human factors in computing systems (CHI'10), pages 4165–4170, 2010.
- [c9] **Eelke Folmer**, Bei Yuan, Dave Carr, and Manjari Sapre. Textsl: a command-based virtual world interface for the visually impaired. In Proceedings of the 11th international ACM SIGACCESS conference on Computers and accessibility (ASSETS'09), pages 59–66, 2009.
- [c8] Bei Yuan and **Eelke Folmer**. Blind hero: enabling guitar hero for the visually impaired. In Proceedings of the 10th international ACM SIGACCESS conference on Computers and accessibility (ASSETS'08), pages 169–176, 2008.
- [c7] **Eelke Folmer**. Component based game development – a solution to escalating costs and expanding deadlines? In Proceedings of 10th International ACM SIGSOFT Symposium on Component-Based Software Engineering (CBSE'07), pages 66–73, 2007.
- [c6] **Eelke Folmer**. Usability patterns in games. In Proceedings the International Academic Conference on the Future of Game Design and Technology (Futureplay'06), 2006.
- [c5] **Eelke Folmer** and Jan Bosch. Cost effective development of usable systems: Gaps between hci and software architecture design. In Proceedings of the 14th International Conference on Information Systems Development: Methods and Tools, Theory and Practice (ISD'05), pages 337–349, 2006.
- [c4] **Eelke Folmer** and Jan Bosch. Case studies on analyzing software architectures for usability. In Proceedings of 31st EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA'05), pages 206 – 213, 2005.
- [c3] **Eelke Folmer**, Jilles van Gurp, and Jan Bosch. Software architecture analysis of usability. In Proceedings of the 9th IFIP International Conference on Engineering for Human Computer Interaction (EHCI'04), pages 111–112, 2004.
- [c2] **Eelke Folmer** and Jan Bosch. Usability patterns in software architecture. In Proceedings of the 10th International Conference on Human-Computer Interaction (HCI'03), pages 93–97, 2003.

- [j22] Savannah J Halow, Allie Hamilton, **Eelke Folmer**, and Paul R MacNeilage. Impaired stationarity perception is associated with increased virtual reality sickness. *Journal of Vision*, 23(14):7–7, 2023.
- [j21] Savannah Halow, James Liu, **Eelke Folmer**, and Paul R MacNeilage. Motor signals mediate stationarity perception. *Multisensory Research*, 36(7):703–724, 2023.
- [j20] Isayas Berhe Adhanom, Paul MacNeilage, and **Eelke Folmer**. Eye tracking in virtual reality: A broad review of applications and challenges. *Virtual Reality*, pages 1–25, 2023.
- [j19] Isayas Adhanom, Savannah Halow, **Eelke Folmer**, and Paul MacNeilage. Vr sickness adaptation with ramped optic flow transfers from abstract to realistic environments. *Frontiers in virtual reality*, 3:848001, 2022.
- [j18] Isayas Berhe Adhanom, Majed Al-Zayer, Paul Macneilage, and **Eelke Folmer**. Field-of-view restriction to reduce vr sickness does not impede spatial learning in women. *ACM Transactions on Applied Perception (TAP)*, 18(2):1–17, 2021.
- [j17] Aniruddha Prithul, Isayas Berhe Adhanom, and **Eelke Folmer**. Teleportation in virtual reality; a mini-review. *Frontiers in Virtual Reality*, 2, 2021.
- [j16] Savannah Halow, Paul MacNeilage, and **Eelke Folmer**. The effect of spatial frequency on visual-vestibular conflict detection. *Journal of Vision*, 21(9):2426–2426, 2021.
- [j15] Majed Al Zayer, Paul MacNeilage, and **Eelke Folmer**. Virtual Locomotion: A Survey. *IEEE Transactions on Visualization and Computer Graphics*, 26(6):2315–2334, 2020.
- [j14] Matthew Moroz, Isabelle Garzorz, **Eelke Folmer**, and Paul MacNeilage. Sensitivity to visual speed modulation in head-mounted displays depends on fixation. *Displays*, 58:12–19, 2019.
- [j13] Jiwan Bhandari, Paul MacNeilage, and **Eelke Folmer**. Teleportation without spatial disorientation using optical flow cues. *Proceedings - Graphics Interface*, 2018-May:153–158, 2018.
- [j12] William Grussenmeyer and **Eelke Folmer**. Accessible touchscreen technology for people with visual impairments: a survey. *ACM Transactions on Accessible Computing (TACCESS)*, 9(2):1–31, 2017.
- [j11] **Eelke Folmer**. Exploring the use of an aerial robot to guide blind runners. *SIGACCESS Access. Comput.*, (112):3–7, July 2015.
- [j10] Ilias Apostolopoulos, Navid Fallah, **Eelke Folmer**, and Kostas Bekris. Integrated online localization and navigation for people with visual impairments using smart phones. *ACM Transactions on Interactive Intelligent Systems*, 3(4):1–25, 2014.
- [j9] Tony Morelli and **Eelke Folmer**. Real-time sensory substitution to enable players who are blind to play video games using whole body gestures. *Entertainment Computing*, 5(1):83 – 90, 2014.
- [j8] Navid Fallah, Ilias Apostolopoulos, Kostas Bekris, and **Eelke Folmer**. Indoor human navigation systems: a survey. *Interacting with Computers*, 25(1):21–33, 2013.
- [j7] Tony Morelli, John Foley, Lauren Lieberman, and **Eelke Folmer**. Improving the lives of youth with vi through exergames. *INSIGHT: Research and Practice in Visual Impairment and Blindness*, 4(4):160–170, 2011.
- [j6] Bei Yuan, **Eelke Folmer**, and Frederick C. Harris, Jr. Game accessibility: a survey. *Universal Access in the Information Society*, 10:81–100, 2011.
- [j5] **Eelke Folmer** and Jan Bosch. Experiences with software architecture analysis of usability. *International Journal of Information Technology and Web Engineering*, 3(4):1–29, 2008.
- [j4] **Eelke Folmer** and Jan Bosch. A pattern framework for software quality assessment and tradeoff analysis tradeoffs. *International Journal of Software Engineering and Knowledge Engineering*, 17(4):515–538, 2007.
- [j3] **Eelke Folmer**, Martijn van Welie, and Jan Bosch. Bridging patterns - an approach to bridge gaps between SE and HCI. *Journal of Information and Software Technology*, 48:69–89, 2006.
- [j2] **Eelke Folmer** and Jan Bosch. Architecting for usability; a survey. *Journal of Systems and Software*, 70(1), 2004.
- [j1] **Eelke Folmer**, Jilles van Gurp, and Jan Bosch. A framework for capturing the relationship between usability and software architecture. *Software Process: Improvement and Practice*, 8(2):67–87, 2003.

BOOK CHAPTERS

- [b3] **Eelke Folmer.** Interaction Design Patterns The glossary of human computer interaction, Chapter 41. Volume 6, 2016
- [b2] **Eelke Folmer.** Video Games for Users with Visual Impairments In Assistive Technology for Blindness and Low Vision. Editors: Sri Kurniawan and Roberto Manduchi, Taylor and Francis, ISBN 9781138073135, 2013
- [b1] **Eelke Folmer.** Game Accessibility. Encyclopedia of Video Games: The Culture, Technology, and Art of Gaming, Pages 3-5, Editor Mark Wolf, ISBN-10: 031337936X, 2012

AWARDS

2018 Google Faculty Research Award.
2016 Infosys InfoMaker Award.
2016 Best Note at CHI-Play 2016
2016 Drones for Good Award (finalist).
2015 Nevada Rising Research Award (Nevada Board of Regents).
2013 Faculty Excellence Award (UNR College of Engineering).
2013 Google Faculty Research Award.
2013 Microsoft Software Engineering Innovation Award.
2012 Nevada Federation of the Blind: Friend of the Blind Award.
2012 People for the Ethical Treatment of Animals (PETA) Proggy Award.
2010 DaVinci Award (Finalist).
2007 Junior Faculty Research Award (University of Nevada).

MEDIA COVERAGE

May. 2021 [Fitness drones are coming, if inventors can get all the kinks out of them](#), Washington Post.
Aug. 2018 [Virtual Reality will soon be able to go underwater](#), UNR News.
Aug. 2018 [Leveling the Playing Field: Women in Virtual Reality](#), Women in Technology International.
Feb. 2016 [How Technology Is Helping the Blind Navigate the Physical World](#), Slate Magazine.
Oct. 2015 [The Brave New World of Generation Open](#), BBC Click.
Oct. 2015 [Fitness Technology That Helps the Blind Get Moving](#), MIT Technology Review.
Oct. 2013 [Exploring the use of an aerial robot to guide blind runners](#), ACM SIGACCESS Newsletter.
Oct. 2013 [SIMVIZ simulates visual impairments with see-through VR display](#), GizMag Magazine
Aug. 2013 [Camera Lets Blind People Navigate with Gestures](#), MIT Technology Review.
Aug. 2013 [Blind games: The next battleground in Accessibility](#), Polygon.
July 2013 [For blind campers, a first chance to swim and canoe](#), Reuters.
June 2013 [Game Accessibility: Enabling Everyone to Play](#), IEEE Computer.
Jan. 2013 [Blinded by sun? Let your steering wheel guide you](#), New Scientist.
May 2012 [Robot sensing and smartphones help blind navigate](#), New Scientist.
May 2012 [Navatar system could help the blind navigate indoors](#), Gizmag
July 2011 [Video Games are all Greek to Eelke Folmer](#), Perkins School of the Blind Newsletter.
Dec. 2011 [Putting the 'We' in Wii for Children with Visual Impairments](#), The President's Challenge Newsletter
June 2010 [VI Fit Is Wii Sports For The Blind](#). Kotaku.
June 2010 [Video Game to Get Blind Children Moving and Laughing](#) Smarter Technology.
May 2010 [Putting the 'we' in Wii for blind gamers](#). CNET.
May 2010 [Being Blind doesn't mean you can't play videogames](#). Games Radar.
Nov. 2008 [Hacks Allowing Disabled Gamers To Play Guitar Hero](#). SlashDot.
Nov. 2008 [Frets on Fire for the Blind](#). Kotaku.
June 2008 [Guitar Hero for the Blind](#). Wired.

INVITED TALKS

May 2022 VR Research at the University of Nevada, Reno, VA/ UNR Virtual Reality Symposium, Online.
Oct. 2021 VR Sickness and Locomotion, Embrace the Metaverse Global Symposium, Sogang University, South Korea.
Mar. 2014 Augmenting the Capabilities of Blind Users using Wearable Computing, Seminar, UC Berkeley, USA.
Jan. 2014 Indoor Navigation for Blind Users, Tech Talk, Google, Mountain View, USA.
Jan. 2014 Game Accessibility, Seminar, EA games, Sacramento, USA.
Dec. 2013 Playing Games without Visual Feedback, Games Talk, ExertionLab, Melbourne, Australia.
Dec. 2013 Exercise games for Blind Kids, Accessible Sports Festival, Melbourne, Australia.
Oct. 2013 Game Accessibility, Seminar, Hanze Hogeschool, Groningen, Netherlands.
July 2013 Augmenting Perception Capabilities of Blind Users, ESTVI Workshop, Smith-Kettlewell.
June 2013 Real-Time Energy Expenditure Prediction for Exergames, Games 4 Health Conference, Boston
May 2013 Playing Games without Visual Feedback, Inventing the Future of Games: Speaker Series, UC Santa Cruz

Nov. 2011 Game Interfaces for Users with Visual Impairments, Research Colloquium, DePaul University.
Jan. 2011 Tactile/Audio Active Play Games for Blind Children Nintendo's Power of Play Symposium, San Francisco.

TEACHING

CS135 Computer Science I	Fall 2006, Spring 2007
CS281 Intro to Game Development	Fall 2007-2011, Spring 2007-2009
CS320 Interaction Design	Spring 2012-13
CS330 Design Patterns	Fall 2010-12,14
CS328 Fundamentals of Game Design	Fall 2014, 2015, 2017, 2018, Spring 2017
CS425 Capstone Software Engineering	Fall 2016,2017
CS426 Capstone Senior Projects	Spring 2010,2015,2017
CS457 Databases	Spring 2013
CS480 Computer Graphics	Spring 2006-2007
CS491 Ubiquitous Computing	Spring 2016
CS484 Virtual Reality	Spring 2017-2024
CS709 Topics in CS: Software Architecture Design	Fall 2008
CS791 Topics in HCI: Player-Game Interaction	Spring 2010-2011,2015

GRADUATE STUDENTS SUPERVISED

May 2023 Aniruddha Prithul, **PhD**. Improvements To Virtual Teleportation (**AutoDesk**)
May 2022 Isayas Adhanom, **PhD**. Exploring Adaptation for Comfortable VR Experiences (**PostDoc U of Minnesota**)
Aug 2020 Nathan Navarro Griffin, **MS**. Out of body locomotion (**Squanch Games**)
May 2019 Majed Al-Zayer, **PhD**. Universal Usability of Virtual Reality (**Meta**)
May 2019 James Liu, **MS**. Evaluation Of Handsbusy Versus Handsfree Virtual Locomotion. (**Unknown**)
Dec 2017 Hirav Parekh, **MS**. Optimizing Natural Walking Usage in VR using Redirected Teleportation. (**Blue Yonder**)
Aug 2017 Walker Spurgeon, **MS**. Exploring handsfree alternatives for teleportation in VR. (**Baker-Hughes**)
Aug 2017 Jiwan Bhandari, **MS**. Navigating Virtual Environments At Scale. (**GE Digital**)
May 2017 William Grussenmeyer, **PhD**. Making Spatial Information Accessible on Touchscreens (**Amazon**)
Dec 2016 Manju Palathingal, **MS**. Exploring Wearables for Visually Impaired People. (**Intel**)
Aug 2016 Sam Tregillus, **MS**. Handsfree Locomotion Techniques for Mobile VR. (**Schneider Electric**)
Dec. 2014 Ilias Apostolopoulos, **PhD**. An Indoor Navigation System for Blind Users. (**Empowered Systems**)
Aug 2014 Halim Çağrı Ateş, **MS**. Immersive Simulation of Visual Impairments (**Apple**).
May. 2014 Alexander Fiannaca, **MS**. Augm. Percep. Cap. of Blind Users using Wearable Computing. (**Google**)
May 2013 Miran Kim, **MS**. Non-Intrusive Physical Activity Prediction for Exergames. (**VGT**)
May 2013 Burkay Sucu, **MS**. A Haptic Steering Interface. (**AppNava**)
Dec. 2012 Vinitha Khambadkar, **MS**. A Gestural UI for Remote Non-visual Spatial Perception. (**MicroFocus**)
Dec. 2011 Tony Morelli, **PhD**. Non-Visual Natural User Interfaces. (**Professor at Central Michigan U.**)
Aug. 2011 Buğra Oktay, **MS**. Efficient Exploration of Second Life using a Natural Language Interface. (**Meta**)
Aug. 2011 Navid Fallah, **PhD**. Mixed Reality Navigation System for Users with Visual Impairments. (**DoorDash**)
May 2011 Austin Wester, **MS**. Unsupervised Game Interface Evaluation. (**Washoe County School District**)
May 2011 Daniel Ramos, **MS**. Playing A Game With Supplemental Modalities. (**IGT**)
Aug. 2009 Manjari Sapre, **MS**. Making Virtual Worlds accessible to Visually Impaired. (**Scientific Games**)
May 2009 Dave Carr, **MS**. Towards Automatic Parallel Game Engine Architectures. (**Google**)
May 2009 Bei Yuan, **PHD**. Towards Generalized Accessibility of Video Games for Visually Impaired. (**Apple**)
May 2008 Chris Franklin, **MS**. Less is More! less Interaction, more Accessible. (**Lockheed Martin**)

CURRENT STUDENTS

May 2024 Savannah Halow, **PhD**. Stationarity Perception and Virtual Reality Sickness
May 2024 Hudson Lynam, **PhD**. Augmented Reality Navigation

PROFESSIONAL SERVICE

Panelist	National Science Foundation 2007, 2012, 2015, 2016, 2017, 2019-2021. National Institute of Health 2023 Department of Defense 2023
Program Committee	ACM SIGACCESS Conference on Computers and Accessibility (ASSETS), 2012-16 ACM Tangible Embodied Interaction (TEI), 2014 ACM Human Factors in Computing Systems (CHI), 2016 ACM Computer-Human Interaction in Play, 2017 ACM VRST, 2023
Conference Organizer	ACM Conference on Computer and Accessibility (ASSETS), 2016 (Local Chair) Games and Software Engineering Workshop (GAS) @ICSE, 2011 ACM Conference on Computers and Accessibility (ASSETS), 2015 (Doctoral Consortium) ACM Conference on Computer and Accessibility (ASSETS), 2014 (Student research competition) Workshop on Game Accessibility: Xtreme Interaction Design (GAXID) @FDG, 2011
Conference Reviewer	ACM Human Factors in Computing Systems (CHI) 2008–2023 IEEE Symposium on Virtual Reality (VR) 2018-2023 IEEE International Symposium on Mixed and Augmented Reality (ISMAR) 2021-2022 ACM User Interface Software and Technology (UIST) 2012-13,17-21 IEEE Symposium on 3D User Interfaces (3DUI) 2017-2019 ACM Symposium on Virtual Reality Software and Technology (VRST), 2017-2021 ACM SIGACCESS Conference on Computers and Accessibility (ASSETS), 2012-16 ACM International Conference on Intelligent User Interfaces (IUI) 2013, 2015 Graphics Interface (GI), 2011-13 Int. Conference on Tangible, Embedded and Embodied Interaction (TEI), 2011-12,2014 Interactive Tabletops and Surfaces (ITS), 2012 IEEE HAPTICS Symposium, 2011-12,2016
Journal Reviewer	IEEE Transactions on Visualization and Computer Graphics, 2020-2022 ACM Transactions on Accessible Computing, 2015, 2016 ACM Transactions on Applied Perception 2016, 2021, 2022 Foundations and Trends in Human Computer Interaction, 2015 IEEE transactions on human-machine systems 2016 Interacting with Computers, 2011, 2013 Journal of Computer Games Technology, 2011 Pervasive and Ubiquitous Computing, 2011 Journal of Systems and Software, 2006, 2009, 2010 IEEE Software, 2006
UNR Service	UNR CIO search, 2023
Department Service	CSE Department Chair, 2018-Current Graduate Director, 2016-2018 UNR Core curriculum board, 2016-2018 Graduate Committee, 2008-09, 2014-2018 Undergraduate Committee, 2009-2012 Faculty search, 2013, 2015, 2017 Digital Interactive Games Curriculum Committee, 2006-Current Faculty Evaluation Committee, 2009-11, 2016 CSE Website Committee, 2010-13 AD-hoc space Committee, 2014-15