

Dr. Myounghoon “Philart” Jeon

Director, Center for Human-Centered Computing, Institute of Computing and Cybersystems

Director, Mind Music Machine Lab

Associate Professor, Department of Cognitive and Learning Sciences

Associate Professor, Department of Computer Science

Michigan Technological University

Room 205 Harold Meese Center; Room 202 Rekhi Hall

1400 Townsend Dr. Houghton, MI 49931

906-487-3273 (Office) | 906-231-5167 (Cell)

mjeon@mtu.edu | <https://sites.google.com/site/mindmusicmachinelab/home>

RESEARCH INTERESTS

- ❖ **Human-Computer Interaction/ Human-Robot Interaction**
- ❖ Assistive Technologies/ Health Care
- ❖ Auditory Displays/ Sonification
- ❖ Affective Computing/ Emotional Design
- ❖ Automotive User Interfaces/ Intelligent Transportation Systems
- ❖ Aesthetic Computing/ Art & Technology Integration

EDUCATION

Georgia Institute of Technology, Atlanta Georgia

- ❖ Ph.D., Engineering Psychology (minor in Human-Computer Interaction), 2012
- ❖ [T3] Dissertation: Effects of affective states on driver situation awareness and adaptive mitigation interfaces – focused on anger (Committee: Bruce Walker, Wendy Rogers, John D. Lee, Arthur D. Fisk, Frank Durso, & Gregory Corso)
- ❖ M.S., Engineering Psychology, 2010
- ❖ [T2] Thesis: “Spindex” (speech index) enhances menu navigation user experience on touch screen devices in various input gestures: Tapping, wheeling, and flicking. (Committee: Bruce Walker, Frank Durso, & Gregory Corso)

Yonsei University, Seoul Korea

- ❖ Graduated from Yonsei Film Scoring Expert Institution, 2007
- ❖ M.S., Cognitive Science (Cognitive Engineering), 2004
- ❖ [T1] Thesis: Usability factors and evaluation for ubiquitous computing (Committee: Kwang Hee Han, Young Woo Sohn, & Kyoung Ja Cho)
- ❖ B.A., Psychology & B.A., Sociology, 2000 (with Highest Honors)

PROFESSIONAL EXPERIENCE

Michigan Technological University

- ❖ Director, Center for Human-Centered Computing/ Associate Director, Institute of Computing and Cybersystems, 2015 Spring – Present
- ❖ Associate Professor, Department of Cognitive and Learning Sciences; Department of Computer Science, 2016 Fall – Present
- ❖ Assistant Professor, Department of Computer Science, 2015 Spring – Present
- ❖ Adjunct Assistant Professor, Department of Computer Science, 2013 Fall – 2014 Fall
- ❖ Assistant Professor, Department of Cognitive and Learning Sciences, 2012 Fall – Present

Georgia Institute of Technology

- ❖ Research Assistant, Sonification Lab (Advisor: Dr. Bruce N. Walker), Aug. 2008 – Aug. 2012

LG Electronics Corporate Design Center, UXD Gr.

- ❖ UI Project Team 3 Leader, Feb. 2008 – Jun. 2008
- ❖ Car Navigation UI Team Leader & Auditory UI Team Leader, Mar. 2005 – Feb. 2008

Daum Communications (Korean web portal), Think Tank: New Media Lab.

- ❖ HCI Research Engineer, Aug. 2004 – Feb. 2005

Yonsei University

- ❖ Associate Researcher, Center for Cognitive Science, Aug. 2002 – Aug. 2004

PUBLICATIONS

BOOKS (Editing)

Jeon, M. (ed., to be published in 2017 May). Emotions and Affect in Human Factors and Human-Computer Interaction, Academic Press.

JOURNALS (Refereed)

[J19] Jeon, M. (2016). Don't cry while you're driving: Sad driving is as bad as angry driving. *International Journal of Human-Computer Interaction*, 32(10), 777-790. Impact factor: 1.26

[J18] Csapó, Á, Wersényi, G., & Jeon, M. (2016). A survey on hardware and software solutions for multimodal wearable assistive devices targeting the visually impaired, *Acta Polytechnica Hungarica*, 13(5), 39-63. Impact factor: 0.544

[J17] Jeon, M., Walker, B. N., & Gable, T. M. (2015). The effects of social interactions with in-vehicle agents on a driver's angry level, driving performance, situation awareness, and perceived workload. *Applied Ergonomics*, 50, 185-199. Impact factor: 2.023

[J16] Jeon, M. (2015). Towards affect-integrated driving behavior research. *Theoretical Issues in Ergonomics*

Science, 16(6), 553-585.

- [J15] **Jeon, M.**, Gable, T. M., Davison, B. K., Nees, M., Wilson, J., & Walker, B. N. (2015). Menu navigation with in-vehicle technologies: Auditory menu cues improve dual task performance, preference, and workload. *International Journal of Human-Computer Interaction*, 31(1), 1-16. Impact factor: 1.26
- [J14] **Jeon, M.** (2015). Auditory user interface design: practical evaluation methods and case studies. *The International Journal of Design in Society*, 8(2), 1-16.
- [J13] **Jeon, M.**, Walker, B. N., & Gable, T. M. (2014). Anger effects on driver situation awareness and driving performance. *Presence: Teleoperators and Virtual Environments*, 23(1), 71-89. Impact factor: 0.731
- [J12] Riener, A., **Jeon, M.**, & Reiner, M. (2014). Theory and technological implications of subliminal perception research. *Presence: Teleoperators and Virtual Environments*, 23(1), iii-vii. Impact factor: 0.731
- [J11] Riener, A., **Jeon, M.**, Alvarez, I., & Zambonelli, F. (2014). Special issue on the social car: Socially-inspired mechanisms for future mobility services. *Pervasive and Mobile Computing*, 14, 66-70. Impact factor: 2.079
- [J10] **Jeon, M.**, Walker, B. N., & Yim, J-B. (2014). Effects of specific emotions on risk perception, driving performance, and perceived workload. *Transportation Research Part F: Traffic Psychology and Behaviour*, 24, 197-209. Impact factor: 1.473
- [J9] Walker, B. N., Lindsay, J., Nance, A., Nakano, Y., Palladino, D. K., Dingler, T., & **Jeon, M.** (2013). Spearcons (speech-based earcons) improve navigation performance in advanced auditory menus. *Human Factors*, 55(1), 157-182. Impact factor: 1.694
- [J8] **Jeon, M.**, Walker, B. N., & Srivastava, A. (2012). "Spindex" (speech index) enhances menu navigation on touch screen devices with tapping, wheeling, and flicking gestures. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 19(2), 14:1-27. Impact factor: 1.833
- [J7] **Jeon, M.**, Gupta, S., Davison, B. K., & Walker, B. N. (2012). Speech menus are not just spoken visual menus: A case study of "unavailable" menu items. *Journal of the Audio Engineering Society (JAES)*, 60(7/8), 505-518. Impact factor: 1.123
- [J6] **Jeon, M.**, & Walker, B. N. (2011). Spindex (speech index) improves auditory menu acceptance and navigation performance. *ACM Transactions on Accessible Computing (TACCESS)*, 3(3), 10:1-26. Impact factor: 1.421
- [J5] Lee, J. H., **Jeon, M.**, & Han, K. H. (2007). Developing the design guideline of auditory user interface for domestic appliances. *Korean Journal of the Science of Emotion & Sensibility*, 10(3), 307-320.
- [J4] Chae, H. S., Hong, J. Y., **Jeon, M.**, & Han, K. H. (2007). A study on voice user interface for domestic appliance. *Korean Journal of the Science of Emotion & Sensibility*, 10(1), 55-68.
- [J3] Yook, H. M., **Jeon, M.**, Oh, C. Y., & Sohn, Y. W. (2004). Study on usability evaluation for wearable computer: Evaluation scale for user-centered smart jacket design. *Korean Journal of the Science of Emotion & Sensibility*, 7(3), 7-13.
- [J2] Yook, H. M., **Jeon, M.**, Lee, H. S., Seong, J. H., Hwang, S. W., Rho, Y. J., & Sohn, Y. W. (2003). Identification of usability elements for designing intelligent jackets. *Korean Journal of the Science of Emotion & Sensibility*, 6(3), 89-99.
- [J1] **Jeon, M.**, Han, K. H. (2003). The differences in processing type of working memory in music reading between

experts and novices. *Korean Journal of the Science of Emotion & Sensibility*, 6(3), 21-28.

BOOK CHAPTERS (Refereed)

- [BC16] Riener, A., **Jeon, M.**, & Alvarez, I. (in press). Driver in the loop. In C. Mueller and G. Meixner (Eds.), *Automotive User Interfaces - Creating Interactive Experiences in the Car*, Springer.
- [BC15] **Jeon, M.** (in press). Emotions and affect in Human Factors and Human-Computer Interaction: Taxonomy, theories, approaches, and methods. In M. Jeon (Ed.), *Affective Sciences in Human Factors and Human-Computer Interaction*, San Diego: Academic Press.
- [BC14] **Jeon, M.** (in press). Emotions in Driving. In M. Jeon (Ed.), *Affective Sciences in Human Factors and Human-Computer Interaction*, San Diego: Academic Press.
- [BC13] FakhrHosseini, S. M. & **Jeon, M.** (in press). Affect/emotion induction methods. In M. Jeon (Ed.), *Affective Sciences in Human Factors and Human-Computer Interaction*, San Diego: Academic Press.
- [BC12] Riener, A., **Jeon, M.**, & Ferscha, A. (2016). Human-car confluence: "Socially-inspired driving mechanisms". In A. Gaggioli, A. Ferscha, G. Riva, S. Dunne, and I. Viaud-Delmon (Eds.), *Human-computer confluence: Transforming human experience through symbiotic technologies*. de Gruyter Open. pp. 294-310.
- [BC11] **Jeon, M.**, Landry, S., Ryan, D. J., & Walker, J. W. (2015). Technologies expand aesthetic dimensions: Visualization and sonification of embodied penwafd drawings. In A. L. Brooks, E. Ayiter, and O. Yazicigil (Eds.), *Arts and Technology. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST) vol. 145*. (pp. 69-76). Springer International Publishing.
- [BC10] **Jeon, M.**, & Croschere, J. (2015). Sorry, I'm late; I'm not in the mood: Negative emotions lengthen driving time. In D. Harris (Ed.), *EPCE 2015, LNAI 9174*, pp. 1-8. Springer International Publishing Switzerland. DOI: 10.1007/978-3-319-20373-7_22
- [BC9] Sun, Y., & **Jeon, M.** (2015). Lyricons (Lyrics + Earcons) improve identification performance of auditory cues. In A. Marcus (Ed.), *Design, user experience and usability (DUXU): Users and interactions, Part II HCII 2015, LNCS 9187*, pp. 382-389. Springer International Publishing Switzerland. DOI: 10.1007/978-3-319-20898-5_37
- [BC8] **Jeon, M.**, Zhang, R., Lehman, W., Fakhrhosseini, S. M., Barnes, J., & Park, C. H. (2015). Development and evaluation of emotional robots for children with autism spectrum disorders. *HCI International 2015 - Posters' Extended Abstracts. Communications in Computer and Information Science vol. 528*, 2015, pp. 372-376. DOI: 10.1007/978-3-319-21380-4_63
- [BC7] Walker, J., Smith, M. T., & **Jeon, M.** (2015). Interactive sonification markup language (ISML) for efficient motion-sound mappings. In M. Kurosu (Ed.), *Human-Computer Interaction: Interaction Technologies, Part II, HCII 2015, LNCS 9170*, pp. 1-10. Springer International Publishing Switzerland. DOI: 10.1007/978-3-319-20916-6_36
- [BC6] **Jeon, M.**, Smith, M. T., Walker, J. W., & Kuhl, A. S. (2014). Constructing the immersive interactive sonification platform (iSoP). In N. Streitz and P. Markopoulos (Eds.), *Distributed, ambient, and pervasive interactions, Lecture Notes in Computer Science (LNCS) 8530*, pp. 337-348. Switzerland: Springer International

Publishing.

- [BC5] Sterkenburg, J., **Jeon, M.**, & Plummer, C. (2014). Auditory emoticons: Iterative design and acoustic characteristics of emotional auditory icons and earcons. In M. Kurosu (Ed.), *Human-Computer Interaction, Part II, HCII 2014, Lecture Notes in Computer Science (LNCS) 8511*, pp. 633-640. Switzerland: Springer International Publishing.
- [BC4] **Jeon, M.** (2013). Lyricons (Lyrics + Earcons): Designing a new auditory cue combining speech and sounds. In C. Stephanidis (Ed.), *Communications in Computer and Information Science (CCIS) 373*, pp. 342-346. Heidelberg: Springer.
- [BC3] **Jeon, M.**, Winton, R. J., Henry, G. A., Oh, S., Bruce, C. M., & Walker, B. N. (2013). Designing interactive sonification for live aquarium exhibits. In C. Stephanidis (Ed.), *Communications in Computer and Information Science (CCIS) 373*, pp. 332-336. Heidelberg: Springer.
- [BC2] **Jeon, M.**, & Lee, J-H. (2013). The ecological AUI (Auditory User Interface) design and evaluation of user acceptance for various tasks on smartphones. In M. Kurosu (Ed.), *Lecture Notes in Computer Science (LNCS) 8007*, pp. 49-58. Heidelberg: Springer.
- [BC1] **Jeon, M.**, & Rayan, I. A. (2011). The effect of physical embodiment of an animal robot on affective prosody recognition. In J.A. Jacko (Ed.), *Lecture Notes in Computer Science (LNCS) 6762*, 523-532. Berlin: Springer-Verlag.

CONFERENCE PROCEEDINGS (Refereed)

- [C120] Barnes, J., FakhrHosseini, S. M., Duford, Z., Vasey, E., Ryan, J., & **Jeon, M.** (2017). Child-robot theater: STEAM Education in an afterschool program, Adjunct Proceedings of the 12th ACM/IEEE International Conference on Human-Robot Interaction (HRI2017). Vienna, Austria, March 6-9.
- [C119] **Jeon, M.**, Politis, I., Shladover, S., Sutter, C., Terken, J., & Poppinga, B. (2016). Towards Life-Long Mobility: Accessible Transportation with Automation. *Proceedings of the 8th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'16)*, Ann Arbor, MI, October 24-26.
- [C118] Landry, S., FakhrHosseini, S. M., **Jeon, M.**, & Tascarella, D. (2016). Listen to Your Drive: An In-Vehicle Sonification Prototyping Tool for Driver State and Performance Data. *Proceedings of the 8th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'16)*, Ann Arbor, MI, October 24-26.
- [C117] Sterkenburg, J., Johnson, J., Landry, S., & **Jeon, M.** (2016). Development Tool for Rapid Evaluation of Eyes-free In-vehicle Gesture Controls. *Proceedings of the 8th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'16)*, Ann Arbor, MI, October 24-26.
- [C116] FakhrHosseini, S. M., & **Jeon, M.** (2016). The Effects of Various Music on Angry Drivers' Subjective, Behavioral, and Physiological States. *Proceedings of the 8th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'16)*, Ann Arbor, MI, October 24-26.
- [C115] **Jeon, M.**, FakhrHosseini, S. M., Landry, S., & Sterkenburg, J. (2016). In-vehicle Auditory Interactions:

Design and Application of Auditory Displays, Speech, Sonification, & Music. *Proceedings of the 8th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'16)*, Ann Arbor, MI, October 24-26.

- [C114] Riener, A., **Jeon, M.**, Alvarez, I., Pfeging, B., Mirnig, A., Tscheligi, M., & Chuang, L. (2016). Ethically inspired user interfaces for decision making in automated driving. *Proceedings of the 8th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'16)*, Ann Arbor, MI, October 24-26.
- [C113] **Jeon, M.** (2016). How is nonverbal auditory information processed? Revisiting existing models and proposing a preliminary model, *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2016)*, Washington, DC, September 19-23.
- [C112] Beville, R., Park, C. H., **Jeon, M.**, & Howard, A. (2016). Behavioral analysis automation for music-based robotic therapy for children with autism spectrum disorder. *Proceedings of the 25th IEEE International Symposium on Robot and Human Interaction Communication*. New York. August 26-31.
- [C111] Landry, S., Sun, Y., Slade, D., & **Jeon, M.** (2016). Tempo-fit heart rate app: Using heart rate sonification as exercise performance feedback. *Proceedings of the 22nd International Conference on Auditory Display (ICAD2016)*, Canberra, Australia, July 2-8.
- [C110] Zhang, R., Barnes, J., Ryan, J., **Jeon, M.**, Park, C. H., & Howard, A. (2016). Musical robots for children with ASD using a client-server architecture. *Proceedings of the 22nd International Conference on Auditory Display (ICAD2016)*, Canberra, Australia, July 2-8.
- [C109] Landry, S., Tascarella, D., **Jeon, M.**, & FakhrHosseini, S. M. (2016). Listen to your drive: Sonification architecture and strategies for driver state performance. *Proceedings of the 22nd International Conference on Auditory Display (ICAD2016)*, Canberra, Australia, July 2-8.
- [C108] Khan, R. A., Avvari, R., Wykovic, K., Ranay, P. & **Jeon, M.** (2016). LifeMusic: Reflection of life memories by data sonification. *Proceedings of the 22nd International Conference on Auditory Display (ICAD2016)*, Canberra, Australia, July 2-8.
- [C107] Sterkenburg, J., Landry, S., **Jeon, M.**, & Johnson, J. (2016). Towards an in-vehicle sonically-enhanced gesture control interface: A pilot study. *Proceedings of the 22nd International Conference on Auditory Display (ICAD2016)*, Canberra, Australia, July 2-8. * **Best Student Paper Award**
- [C106] **Jeon, M.** (2016). Aesthetic computing for representation of the computing process and expansion of perceptual dimensions: Cases for art, education, and interfaces. *Proceedings of the 5th International Conference on Arts and Technology (ArtsIT2016)*, Esbjerg, Denmark, May 2-3. * **Best Paper Award**
- [C105] **Jeon, M.**, Jafari, M., & Gauchia, L. (2016). Behavior change for optimal battery performance and aging of electric vehicles, *Proceedings of the Workshop on "Where are we bound for, Persuasion in Transport Applications" at the 11th International Conference on Persuasive Technology*, Salzburg, Austria, April 5-7.
- [C104] **Jeon, M.**, FakhrHosseini, S. M., Barnes, J., Duford, Z., Zhang, R., Ryan, J. & Vasey, E. (2016). Making live theatre with multiple robots as actors: Bringing robots to rural schools to promote STEAM education for underserved students, *Proceedings of the 11th ACM/IEEE International Conference on Human-Robot Interaction (HRI2016)*. New Zealand, March 7-10.

- [C103] Kim, H. J., Lee, J. W., Rennie, A., Beville, R., Park, C. H., **Jeon, M.**, & Howard, A. (2016). Interactive robotic framework for multi-sensory therapy for children with Autism Spectrum Disorder, *Proceedings of the 11th ACM/IEEE International Conference on Human-Robot Interaction (HRI2016)*. New Zealand, March 7-10.
- [C102] Beville, R., Park, C. H., **Jeon, M.**, & Howard, A. (2016). Multisensory robotic therapy to promote natural emotional interaction for children with ASD, *Abstract and Video in Videos Track of the 11th ACM/IEEE International Conference on Human-Robot Interaction (HRI2016)*. New Zealand, March 7-10.
- [C101] Landry, S., **Jeon, M.**, Lautala, P., & Nelson, D. (2016). Getting active with passive crossings: Investigating the use of in-vehicle auditory alerts for highway-rail grade crossings, *Proceedings of the 2016 IEEE/ASME Joint Rail Conference (JRC2016)*. Columbia, SC, April 12-15.
- [C100] Riener, A., **Jeon, M.**, Frolich, P., & Meschtscherjakov, A. (2016). Persuasion in Transport Applications, *Adjunct Proceedings of the 11th International Conference on Persuasive Technology*, Salzburg, Austria, April 5-7.
- [C99] **Jeon, M.** (2015). UX challenges and opportunities of autonomous vehicles regarding driving styles and automation levels, *Adjunct Proceedings of the 3rd Workshop on User Experience of Autonomous Driving at the 7th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'15)*, Nottingham, UK, September 1-3.
- [C98] FakhrHosseini, S. M., **Jeon, M.**, & Bose, R. (2015). Estimation of drivers' emotional states based on neuroergonomic equipment: An exploratory study using fNIRS, *Proceedings of the 7th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'15)*, Nottingham, UK, September 1-3.
- [C97] **Jeon, M.**, Bazilinskyy, P., Hammerschmidt, J., Hermann, T., Landry, S., Wolf, KA. et al. (2015). Report on the in-vehicle auditory interactions workshop: Taxonomy, challenges, and approaches, *Adjunct Proceedings of the Workshop on Practical Experiences in Measuring and Modeling Drivers and Driver-Vehicle Interactions at the 7th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'15)*, Nottingham, UK, September 1-3.
- [C96] Meschtscherjakov, A., Tscheligi, M., Szostak, D., Ratan, R., McCall, R., Politis, I., Krome, S., Riener, A., **Jeon, M.**, & Terken, J. (2015). The 3rd workshop on user experience of autonomous driving, *Proceedings of the 7th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'15)*, Nottingham, UK, September 1-3.
- [C95] Riener, A., Alvarez, I., **Jeon, M.**, Chuang, L., Ju, W., Pfleging, B., & Chiesa, M. (2015). Workshop on practical experiences in measuring and modeling drivers and driver-vehicle interactions, *Proceedings of the 7th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'15)*, Nottingham, UK, September 1-3.
- [C94] Park, C. H., **Jeon, M.**, & Howard, A. (2015). Robotic framework with multi-modal perception for physio-musical interactive therapy for children with autism, *Proceedings of the Joint IEEE International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRob)*, Providence, USA, August, 13-16.
- [C93] **Jeon** et al. (2015). Proceedings of the "in-vehicle auditory interactions" workshop, the 21st International Conference on Auditory Display (ICAD2015), Graz, Austria, July 8-10.
- [C92] FakhrHosseini, S. M., Kirby, P., & **Jeon, M.** (2015). Regulating drivers' aggressiveness by sonifying

- emotional data. *Proceedings of the 21st International Conference on Auditory Display (ICAD2015)*, Graz, Austria, July 8-10.
- [C91] Landry, S., Croschere, J., & **Jeon, M.** (2015). Subjective assessment of in-vehicle auditory warnings for rail grade crossings. *Proceedings of the 21st International Conference on Auditory Display (ICAD2015)*, Graz, Austria, July 8-10.
- [C90] **Jeon, M.** (2015). Exploration of semiotics of new auditory displays: A comparative analysis with visual displays. *Proceedings of the 21st International Conference on Auditory Display (ICAD2015)*, Graz, Austria, July 8-10.
- [C89] **Jeon, M.**, Lee, J-H., Sterkenburg, J., & Plummer, C. (2015). Cultural differences in preference of auditory emoticons: USA and South Korea. *Proceedings of the 21st International Conference on Auditory Display (ICAD2015)*, Graz, Austria, July 8-10.
- [C88] Xu, J., Montague, E., Gratch, J., Hancock, P., **Jeon, M.**, & Pfaff, M. S. (2015). Advances of Research in Affective Processes in Communication and Collaboration. Invited Discussion Panel. *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2015)*, Los Angeles, CA, October 26-30.
- [C87] Gable, T. M., Walker, B. N., Baldwin, C. L., **Jeon, M.**, Kun, A. L., & Mehler, B. (2015). Collection and analysis of physiological measures in driving research. Invited Discussion Panel. *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2015)*, Los Angeles, CA, October 26-30.
- [C86] **Jeon, M.** (2015). What to teach in HCI?: How to educate HCI students to envision the future of human beings, not the future of technology? *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2015)*, Los Angeles, CA, October 26-30.
- [C85] **Jeon, M.** (2015). Lessons from emotional driving research. *Proceedings of the 19th Triennial Congress of the International Ergonomics Association*, Melbourne, Australia, August 9-14.
- [C84] Khalid, H., Helander, M. Hancock, P. **Jeon, M.** Seva, R., & Brudere, R. (invited panel. 2015). Affective design and EQUID: Emotional and ergonomic quality in product design and development. *Proceedings of the 19th Triennial Congress of the International Ergonomics Association*, Melbourne, Australia, August 9-14.
- [C83] Kim, H. J., Azad, T., Park, C. H., **Jeon, M.**, & Howard, A. M. (2015). Towards physio-musical interactive robotic therapy for children with autism. *Proceedings of the Workshop on Rehabilitation Robotics and Human-Robot Interaction, 2015 IEEE International Conference on Robotics and Automation (ICRA 2015)*, Seattle, WA, May 26-30.
- [C82] **Jeon, M.** (2015). Embarrassment as a divergent thinking process for creative arts in the immersive virtual environment. *Proceedings of the workshop on "Embarrassing Interactions", ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'15)*, Seoul, Korea, April 18-23.
- [C81] **Jeon, M.** (2015). Auditory user interface design: Practical evaluation methods and design process case studies. *Proceedings of the 9th International Conference on Design Principles and Practices*, Chicago, IL, March 12-14.
- [C80] Zhang, R., **Jeon, M.**, Park, C. H., & Ayanna, M. H. (2015). Robotic sonification for promoting emotional and social interactions of children with ASD. *Proceedings of the 10th ACM/IEEE International Conference on Human-Robot Interaction (HRI2015)*, Portland, USA, March 2-5.

- [C79] **Jeon, M.**, & Croschere, J. (2015). Sorry, I'm late; I'm not in the mood: Negative emotions lengthen driving time. *Proceedings of the 17th International Conference on Human-Computer Interaction (HCII 2015)*, Los Angeles, CA.
- [C78] **Jeon, M.**, Zhang, R., Lehman, W., FakhrHosseini, S. M., Barnes, J., & Park, C. H. (2015). Development and evaluation of emotional robots for children with autism spectrum disorders. *Proceedings of the 17th International Conference on Human-Computer Interaction (HCII 2015)*, Los Angeles, CA.
- [C77] Sun, Y., & **Jeon, M.** (2015). Lyricons (Lyrics + Earcons) improve identification performance of auditory cues. *Proceedings of the 17th International Conference on Human-Computer Interaction (HCII 2015)*, Los Angeles, CA.
- [C76] Walker, J., Smith, M. T., & **Jeon, M.** (2015). Interactive sonification markup language (ISML) for efficient motion-sound mappings. *Proceedings of the 17th International Conference on Human-Computer Interaction (HCII 2015)*, Los Angeles, CA.
- [C75] Park, C. H., Pai, N., Bakthavatchalam, J., Li, Y., **Jeon, M.**, & Ayanna, M. H. (2015). Robotic framework for music-based emotional and social engagement with children with autism. *Proceedings of Workshop on Artificial Intelligence Applied to Assistive Technologies and Smart Environment, the 29th AAAI Conference on Artificial Intelligence (AAAI-15)*, Austin, TX.
- [C74] Fakhrhosseini, S. M., **Jeon, M.**, Lautala, P., & Nelson, D. (2015). An investigation on driver behaviors and eye-movement patterns at grade crossings. *Proceedings of the Joint Rail Conference (JRC2015)*, San Jose, CA, March 23-26.
- [C73] **Jeon, M.** Landry, S., Ryan, J. D., & Walker, J. W. (2014). Technologies expand aesthetic dimensions: Visualization and sonification of embodied penwold drawings. *Proceedings of the 4th International Conference on Arts and Technology (ArtsIT2014)*, Istanbul, Turkey, November 10-12.
- [C72] Lehtola, W. I., Gemignani, S. M., Sutherland, J. T., & **Jeon, M.** (2014). "Not all visual media are helpful": An optimal instructional medium for effective online learning. *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2014)*, Chicago, IL, October 27-31.
- [C71] Tislar, C., Sterkenburg, J., Zhang, W., & **Jeon, M.** (2014). How emotions influence trust in online transactions using new technology. *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2014)*, Chicago, IL, October 27-31.
- [C70] **Jeon, M.** (2014). Advanced vehicle sonification application. Interactions Workshop. *Proceedings of the 6th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'14)*, ACM Press, Seattle, WA, USA, September 17-19.
- [C69] Fakhrhosseini, S. M., Landry, S., Tan, Y-Y., Bhattarai, S., & **Jeon, M.** (2014). If you're angry, turn the music on: Music can mitigate anger effects on driving performance. *Proceedings of the 6th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'14)*, ACM Press, Seattle, WA, USA, September 17-19.
- [C68] Riener, A., Pflöging, B., **Jeon, M.**, Chiesa, M., Alvarez, I., Löcken, A., & Müller, H. (2014). Social, natural, and peripheral interactions: Together and separate. *Proceedings of the 6th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'14)*, ACM Press, Seattle, WA, USA, September 17-19.

- [C67] **Jeon, M.**, Walker, B. N., Barrass, S. F., & Fernström, M. (2014). Introduction to the 1st sonic information design workshop. *Adjunct Proceedings of the Sonic Information Design Workshop. 20th International Conference on Auditory Display (ICAD2014)*, pp. 5-7, NY, June 22-25.
- [C66] **Jeon, M.** (2014). How can lay people participate in sound design? Introduction to sound mapping tools and methods. *Adjunct Proceedings of the Sonic Information Design Workshop. 20th International Conference on Auditory Display (ICAD2014)*, pp. 29-31, NY, June 22-25.
- [C65] Landry, S., Ryan, J., & **Jeon, M.** (2014). Design issues and considerations for dance-based sonification. *Adjunct Proceedings of the Sonic Information Design Workshop. 20th International Conference on Auditory Display (ICAD2014)*, pp. 35-38, NY, June 22-25.
- [C64] **Jeon, M.**, & Sun, Y. (2014). Design and evaluation of lyricons (lyrics + earcons) for semantic and aesthetic improvements of auditory cues. *Proceedings of the 20th International Conference on Auditory Display (ICAD2014)*, NY, June 22-25.
- [C63] Nees, M. A., Gable, T., **Jeon, M.**, & Walker, B. N. (2014). Prototype auditory displays for a fuel efficiency driver interface. *Proceedings of the 20th International Conference on Auditory Display (ICAD2014)*, NY, June 22-25.
- [C62] Fakhrosseini, S. M., Riener, A., Bose, R., & **Jeon, M.** (2014). "Listen2dRoom": Helping visually impaired people navigate indoor environments using an ultrasonic sensor-based navigation system. *Proceedings of the 20th International Conference on Auditory Display (ICAD2014)*, NY, June 22-25.
- [C61] **Jeon, M.** Smith, M. T., Walker, J. W., & Kuhl, A. S. (2014). Constructing the immersive interactive sonification platform (iISoP). *Proceedings of the 16th International Conference on Human-Computer Interaction (HCI2014)*, Creta Maris, Heraklion, Crete, Crece 22-27 June, 2013. pp. TBD.
- [C60] Sterkenburg, J., **Jeon, M.**, & Plummer, C. (2014). Auditory emoticons: Iterative design and acoustic characteristics of emotional auditory icons and earcons. *Proceedings of the 16th International Conference on Human-Computer Interaction (HCI2014)*, Creta Maris, Heraklion, Crete, Crece 22-27 June, 2013. pp. TBD.
- [C59] Landry, S., **Jeon, M.**, & Ryan, J. (2014). A broad spectrum of sonic interactions at immersive interactive sonification platform (iISoP). *Proceedings of the 21st IEEE Virtual Reality Conference (Workshop in Sonic Interactions in Virtual Environments)*, Minneapolis, Minnesota, March 29-April 1.
- [C58] Jansen, S., Westphal, A., **Jeon, M.**, & Riener, A. (2013). Detection of drivers' incidental and integral affect using physiological measures. *Adjunct Proceedings of the 5th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'13)*, ACM Press, Eindhoven, The Netherlands, October 27-30.
- [C57] **Jeon, M.**, & Lautala, P. (2013). Necessity of vehicle to rail infrastructure communication for grade crossing warning & safety. *Adjunct Proceedings of the 5th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'13)*, ACM Press, Eindhoven, The Netherlands, October 27-30.
- [C56] Riener, A., **Jeon, M.**, & Alvarez, I. (2013). Workshop proposal: "Socially-inspired mechanisms for future mobility services." *Proceedings of the 5th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'13)*, ACM Press, Eindhoven, The Netherlands, October 27-30.

- [C55] **Jeon, M.**, Walker, B. N., & Bruce, C. M. (2013). Science or art? "Sonification in the age of biocybernetic reproduction": A case study of the accessible aquarium project. *Proceedings of the International Conference on Auditory Display (ICAD2013)*, Poland, July 6-10.
- [C54] Kumar, S, Sterkenburg, J, Diekfuss, J., & **Jeon, M.** (2013). Color effects on students' emotions and task performance in a web-based learning management system. *Proceedings of the 1st International Conference on Multimedia and Human Computer Interaction (MHCI'13)*, pp. TBD. Toronto, Canada, July 18-19.
- [C53] **Jeon, M.**, & Zhang, W. (2013). Sadder but wiser? Effects of negative emotions on risk perception, driving performance, and perceived workload. *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2013)*, pp. TBD. San Diego, CA, September 30-October 4.
- [C52] Ellis, K. M., Norman, C., van der Merwe, A., & **Jeon, M.** (2013). Increasing physical therapy patient compliance and satisfaction with web-based applications. *Proceedings of the Human Factors and Ergonomics Society International Annual Meeting (HFES2013)*, pp. TBD. San Diego, CA, September 30-October 4.
- [C51] **Jeon, M.** (2013). Lyricons (Lyrics + Earcons): Designing a new auditory cue combining speech and sounds. *Proceedings of the 15th International Conference on Human-Computer Interaction (HCI2013)*, Las Vegas, Nevada, 21-26 July, 2013.
- [C50] **Jeon, M.**, Winton, R., Henry, A., Oh, S., Bruce, C., & Walker, B. N. (2013). Designing interactive sonification for live aquarium exhibits. *Proceedings of the 15th International Conference on Human-Computer Interaction (HCI2013)*, Las Vegas, Nevada, 21-26 July, 2013. * **Best Poster Paper Award**
- [C49] **Jeon, M.**, & Lee, J-H. (2013). The ecological AUI (Auditory User Interface) design and evaluation of user acceptance for various tasks on smartphones. *Proceedings of the 15th International Conference on Human-Computer Interaction (HCI2013)*, Las Vegas, Nevada, 21-26 July, 2013.
- [C48] **Jeon, M.**, Walker, B. N., & Srivastava, A. (2013). "Spindex" (speech index) enhances menu navigation on touch screen devices with tapping, wheeling, and flicking gestures. *ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'13)*, ACM Press, Paris, France, 27 April-2 May, 2013.
- [C47] Suh, H., **Jeon, M.**, & Walker, B. N. (2012). Spearcons improve navigation performance and perceived speediness in Korean auditory menus. *Proceedings of the 56th Annual Meeting of the Human Factors and Ergonomics Society (HFES2012)*, Boston, MA, October22-26, 2012.
- [C46] **Jeon, M.** (2012). "Yes, free parking lot app, no, invisible health check app in my car": Young drivers' needs analysis on vehicle area network services. *Adjunct Proceedings of the workshop "The Social Car" at the 4th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'12)*, ACM Press, Portsmouth, New Hampshire, USA, October 17-19.
- [C45] Riener, A., **Jeon, M.**, Gaggioli, A., & Dey, A. (2012). Auto-UI workshop proposal: "The social car". *Proceedings of the 4th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'12)*, ACM Press, Portsmouth, New Hampshire, USA, October 17-19.
- [C44] **Jeon, M.**, Riener, A., Lee, J-H., Schuett, J., & Walker, B. N. (2012). Cross-cultural differences in the use of in-vehicle technologies and vehicle area network services: Austria, USA, and South Korea. *Proceedings of the 4th International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'12)*, ACM

Press, Portsmouth NH, USA, October 17-19, 2012.

- [C43] **Jeon, M.** (2012). A systematic approach to using music for mitigating affective effects on driving performance and safety. *Proceedings of the 14th ACM International Conference on Ubiquitous Computing (UbiComp'12)*, ACM Press, Pittsburgh, USA, September 5-8, 2012.
- [C42] Riener, A., & **Jeon, M.** (2012). The role of subliminal perception in vehicular interfaces. *Proceedings of the 14th ACM International Conference on Ubiquitous Computing (UbiComp'12)*, ACM Press, Pittsburgh, USA, September 5-8, 2012.
- [C41] Riener, A., **Jeon, M.**, Reiner, M., & Chalfoun, P. (2012). Workshop proposal: Methodical approaches to prove the effects of subliminal perception in a ubiquitous computing environment. *Proceedings of the 14th ACM International Conference on Ubiquitous Computing (UbiComp'12)*, ACM Press, Pittsburgh, USA, September 5-8, 2012.
- [C40] **Jeon, M.**, Winton, R. J., Yim, J-B., Bruce, C. M., & Walker, B. N. (2012). AquariumFugue: Interactive sonification for children and visually impaired audience in informal learning environments. *Proceedings of the 18th International Conference on Auditory Display (ICAD2012)*, Atlanta, GA, USA, June, 2012.
- [C39] **Jeon, M.**, Nazneen, Akanser, O., Ayala-Acevedo, A., & Walker, B. N. (2012). "Listen2dRoom": Helping blind individuals understand room layouts. *ACM CHI Extended Abstracts Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'12)*, ACM Press, Austin, TX, May 5-10, 2010. pp. TBD.
- [C38] **Jeon, M.**, Yim, J-B., & Walker, B. N. (2011). An angry driver is not the same as a fearful driver: Different effects of specific negative emotions on risk perception, driving performance, and workload. *Proceedings of the 3rd International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'11)*, ACM Press, pp. 137-140. Salzburg, Austria, November 29-December 2.
- [C37] **Jeon, M.**, & Walker, B. N. (2011). In-vehicle affect detection and mitigation interfaces: Strategies and research questions in designing unobtrusive interactions. *Proceedings of the Subliminal Perception in Cars Workshop, the 3rd International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'11)*, ACM Press, Salzburg, Austria, November 29-December 2.
- [C36] **Jeon, M.**, Schuett, J, Yim, J-B., Raman, P., & Walker, B. N. (2011). ENGIN (Exploring Next Generation IN-vehicle INterfaces): Drawing a new conceptual framework through iterative participatory processes. *Adjunct Proceedings of the 3rd International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'11)*, ACM Press, Salzburg, Austria, November 29-December 2.
- [C35] Riener, A., Tscheligi, M., **Jeon, M.**, & Fellner, J. (2011). Workshop proposal: Subliminal perception in cars. *Proceedings of the 3rd International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'11)*, ACM Press, Salzburg, Austria, November 29-December 2.
- [C34] **Jeon, M.**, Roberts, J., Raman, P., Yim, J-B., & Walker, B. N. (2011). Participatory design process for an in-vehicle affect detection and regulation system for various drivers. *Proceedings of the 13th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'11)*, ACM Press, October 24-26, 2011, Dundee, Scotland.

- [C33] **Jeon, M.**, & Walker, B. N. (2011). What to detect? Analyzing factor structures of affect in driving contexts for an emotion detection and regulation system. *Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society (HFES2011)*, Las Vegas, Nevada, September, 19-23, 2011. pp. TBD.
- [C32] **Jeon, M.**, & Rayan, I. A. (2011). The effect of physical embodiment of an animal robot on affective prosody recognition. *Proceedings of the 14th International Conference on Human-Computer Interaction (HCI2011)*, Orlando, FL, July, 9-14, 2011.
- [C31] **Jeon, M.**, & Walker, B. N. (2011). Emotion detection and regulation interface for drivers with traumatic brain injury. *Proceedings of the Dynamic Accessibility Workshop, ACM SIGCHI Conference on Human Factors in Computing Systems (CHI'11)*, ACM Press, Vancouver, BC, Canada, May 7-12, 2011.
- [C30] **Jeon, M.** (2010). "i-PASSION": A concept car user interface case study from the perspective of user experience design. *Proceedings of the 2nd International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'10)*, ACM Press, Pittsburgh, PA, November 11-12. pp. 16.
- [C29] Moskovich, Y., **Jeon, M.**, & Walker, B. N. (2010). Enhanced auditory menu cues on a mobile phone improve time-shared performance of a driving-like dual task. *Proceedings of the Annual Meeting of the Human Factors and Ergonomics Society (HFES2010)*, San Francisco, CA, September 27-October 1. pp. 1321-1325.
- [C28] Raman, P., Davison, B. K., **Jeon, M.**, & Walker, B. N. (2010). Reducing repetitive development tasks in auditory menu displays using the Auditory Menu Library. *Proceedings of the 16th International Conference on Auditory Display (ICAD2010)*, Washington, D. C, June, 2010.
- [C27] **Jeon, M.** (2010). Two or three things you need to know about AUI design or designers. *Proceedings of the 16th International Conference on Auditory Display (ICAD2010)*, Washington, D. C, June, 2010.
- [C26] **Jeon, M.**, Gupta, S., Davison, B. K., & Walker, B. N. (2010). Auditory menus are not just spoken visual menus: A case study of "unavailable" menu items. *ACM CHI Extended Abstracts Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI'10)*, ACM Press, Atlanta, GA, April, 2010. pp. 3319-3324.
- [C25] **Jeon, M.**, Davison, B., Wilson, J., Raman, P., & Walker, B. N. (2010). Advanced auditory menus for universal access to electronic devices. *the 25th Annual International Technology & Persons with Disabilities Conference (CSUN2010)*, San Diego, CA, March, 2010.
- [C24] **Jeon, M.**, & Walker, B. N. (2009). "Spindex": Accelerated initial speech sounds improve navigation performance in auditory menus. *Proceedings of the Annual Meeting of the Human Factors and Ergonomics Society (HFES2009)*, San Antonio, TX, October, 2009. pp. 1081-1085. * **Best Student Paper Award**
- [C23] **Jeon, M.**, Park, J., Heo, U., & Yun, J. (2009). Enhanced turning point displays facilitate drivers' interaction with navigation devices. *Proceedings of the 1st International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'09)*, ACM Press, Essen, Germany, September, 2009. pp. 145-148.
- [C22] **Jeon, M.**, Davison, B., Wilson, J., Nees, M., & Walker, B. N. (2009). Enhanced auditory menu cues improve dual task performance and are preferred with in-vehicle technologies. *Proceedings of the 1st International Conference on Automotive User Interfaces and Vehicular Applications (AutomotiveUI'09)*, ACM Press, Essen, Germany, September, 2009. pp. 91-98.

- [C21] **Jeon, M.**, Na, D. Y., Ahn, J. H., & Hong, J. Y. (2008). User segmentation & UI optimization through mobile phone log analysis. *Proceedings of the 10th International Conference on Human Computer Interaction with Mobile Devices and Services (MobileHCI'08)*, ACM Press, Amsterdam, Netherlands, September, 2008. pp.495-496.
- [C20] **Jeon, M.** (2008). A proposal for a cognitive creativity model: A gradually divergent thinking model based on cognitive economy. *Proceedings of the 6th International Conference of Cognitive Science (ICCS2008)*, 731-734, Seoul, Korea, July, 2008.
- [C19] **Jeon, M.**, Heo, U., Ahn, J. H., & Kim, J. (2008). Emotional palette: Affective user experience elements for product design according to user segmentation. *Proceedings of the 6th International Conference of Cognitive Science (ICCS2008)*, 600-603, Seoul, Korea, July, 2008.
- [C18] **Jeon, M.**, Na, D. Y., & Ahn, J. H. (2008). Buying vs. Using: User re-segmentation and UI optimization through cellular phone log analysis. *Proceedings of the 2008 Korean Conference on Human Computer Interaction (HCI2008)*, 460-464, Kangwon, Korea, February, 2008.
- [C17] Kim, S., Choe, J., Jung, E., S., Choi, K., **Jeon, M.**, Park, J., & Ahn, J. (2008). A study on the navigation menu structure with size screen. *Proceedings of the 2008 Korean Conference on Human Computer Interaction (HCI2008)*, 2, 380-385, Kangwon, Korea, February, 2008.
- [C16] Park, J. H., **Jeon, M.**, & Ahn, J. H. (2007). An interface development of an auto PC using task analysis and scenario-based design. *Volume II of the Proceedings of the 2007 Korean Conference on Human Computer Interaction (HCI2007)*, 548-553, Kangwon, Korea, February, 2007.
- [C15] Chae, H. S., Hong, J. Y., Lee, J. H., **Jeon, M.**, Kim, M. S., Heo, U., & Han, K. H. (2007). A study on voice user interface for domestic appliance. *Volume II of the Proceedings of the 2007 Korean Conference on Human Computer Interaction (HCI2007)*, 185-192, Kangwon, Korea, February, 2007.
- [C14] Lee, J. H., **Jeon, M.**, Ahn, J. H., & Han, K. H. (2006). Developing the design guideline of auditory user interface for domestic appliances. *Volume II of the Proceedings of the 2006 Korean Conference on Human Computer Interaction (HCI2007)*, 1-8, Kangwon, Korea, February, 2006.
- [C13] Chae, H. S., Hong, J. Y., Lee, J. H., **Jeon, M.**, Ryu, J., & Han, K. H. (2004). Directions of speech recognition on wearable computer. *Proceedings of the 2004 Korean Conference on Cognitive Science (KCCS2004)*, 149-151, Seoul, Korea, June, 2004.
- [C12] Yang, J., Kim, Y. E., Jeon, H., **Jeon, M.**, Chae, H. S., & Han, K. H. (2004). The comparison of cognitive process according to hangul input form on cellular phone. *Proceedings of the 2004 Korean Conference on Cognitive Science (KCCS2004)*, 114-117, Seoul, Korea, June, 2004.
- [C11] **Jeon, M.**, Lee, J. H., Kim, Y. E., & Han, K. H. (2004). Analysis of musical features and affective words for affect-based music search system. *Proceedings of the 2004 Korean Conference on Cognitive Science (KCCS2004)*, 133-137, Seoul, Korea, June, 2004.
- [C10] **Jeon, M.**, Yook, H. M., Hwang, S. W., Seong, J. H., Cheng, C., Kim, J. Y., Lee, C. S., Ahn, J. W., Sohn, Y. W., Han, T. D. & Han, K. H. (2004). Usability factors for mobile Ubicomp. *Proceedings of the 5th Korea-Japan Joint Symposium on Emotion and Sensibility*, Seoul, Korea, June, 2004.
- [C9] Han, T. D., Cheong, C., Ahn, J. W., Kim, J. Y., Yoon, H. M., Lee, C. S., Shin, H. G., Lee, Y. J., Yook, H. M.,

- Jeon, M.**, Choi, J. S., Lee, J. H., Sohn, Y. W., Baek, Y. S., Lee, S. Y., Shin, E. D., Kang, W. S., & Kim, S. W. (2004). Implementation of new services to support ubiquitous computing for campus life. *The 2nd IEEE Workshop on Software Technologies for Embedded and Ubiquitous Computing Systems (WSTFEUS'04)*, Vienna, Austria, May, 2004.
- [C8] Lee, J. H., **Jeon, M.**, & Han, K. H. (2004). The analysis of sound attributes on sensibility dimensions. *Volume II of the Proceedings of the 18th International Congress on Acoustics (ICA2004)*, 1795-1798, Kyoto, Japan, April, 2004.
- [C7] Yook, H. M., **Jeon, M.**, Seong, J. H., Lee, Y. J., Sohn, Y. W., & Lee, J. H. (2004). Development of usability evaluation criteria for user-centered smart jacket design. *Volume II of the Proceedings of the 2004 Korean Conference on Human Computer Interaction [Design, Social Science, & Humanities] (HCI2004)*, 139-144, Kangwon, Korea, February, 2004.
- [C6] **Jeon, M.**, Yook, H. M., Seong, J. H., Jung, C. H., Sohn, Y. W., & Han, T. D. (2004). Interactive design process to construct on-campus ubiquitous computing environment. *Proceedings of the 2004 Korean Conference on Human Computer Interaction (HCI2004)*, Kangwon, Korea, February, 2004.
- [C5] Yook, H. M., **Jeon, M.**, Rho, Y. J., Seong, J. H., Lee, H. S., & Sohn, Y. W. (2003). User needs analysis for intelligent jacket design. *Proceedings of the Korean Society for Emotion and Sensibility Conference (KSESC2003)*, 1131-1138, Seoul, Korea, November, 2003.
- [C4] **Jeon, M.**, & Han, K. H. (2003). Difference in processing type of working memory in music reading between experts and novices. *Proceedings of the 4th International Conference of Cognitive Science (ICCS2003)*, 222-227, Sidney, Australia, July, 2003.
- [C3] Lee, J. H., **Jeon, M.**, & Han, K. H. (2003). The sound sensibility dimension for auditory displays. *Proceedings of the 4th International Conference of Cognitive Science (ICCS2003)*, 342-345, Sidney, Australia, July, 2003.
- [C2] Lee, J. H., **Jeon, M.**, & Kim, M. S. (2003). Auditory displays on the depth of hypertext. *Proceedings of the 9th International Conference on Auditory Display (ICAD2003)*, 55-58, Boston, MA, USA, July, 2003.
- [C1] Han, S. S., **Jeon, M.**, Hong, J. Y., & Han, K. H. (2003). Menu structure of cellular phone according to users. *Proceedings of the 2003 Korean Conference on Human Computer Interaction (HCI2003)*, 28-33, Kangwon, Korea, February, 2003.

Conference Abstracts (Reviewed)

- [CA17] Lautala, P., Nelson, D., & **Jeon, M.** (2016). Driver behavior at level crossings using naturalistic driving study data, *Proceedings of the 14th Global Level Crossing and Trespass Symposium*, Helsinki, Finland, June 12-16.
- [CA16] Landry, S., **Jeon, M.**, Lautala, P., & Nelson, D. (2016). Design and evaluation of in-vehicle auditory alerts for railroad crossings, *Proceedings of the 14th Global Level Crossing and Trespass Symposium*, Helsinki, Finland, June 12-16.
- [CA15] Croschere, J., Landry, S., Perelman, B., **Jeon, M.**, Lautala, P., & Nelson, D. (2015). Driver awareness at railroad grade crossings: Examining effectiveness of auditory and visual warnings to improve safety. *Proceedings*

- of the Midwest Cognitive Science Conference (MWCogsci-5), May 10, 2015, Mackinac Island, MI.
- [CA14] Landry, S., Sun, Y., Slade, D., & **Jeon, M.** (2015). Tempo-fit heart rate app: a novel way of improving exercise efficiency via music tempo manipulation. *Proceedings of the Midwest Cognitive Science Conference (MWCogsci-5)*, May 10, 2015, Mackinac Island, MI.
- [CA13] FakhrHosseini, S. M., Bose, R., & **Jeon, M.** (2015). A comparison of PFC activity between different anger induction techniques using functional near-infrared spectroscopy (fNIRS). *Proceedings of the Midwest Cognitive Science Conference (MWCogsci-5)*, May 10, 2015, Mackinac Island, MI.
- [CA12] Hardy, A., Hill, J., **Jeon, M.**, & Lautala, P. (2014). Driver response to various railroad grade crossings and hazard detection. *Proceedings of the 2014 Global level crossing safety and trespass prevention symposium (GLXS-2014)*, IL, August 3-6.
- [CA11] Sun, Y., & **Jeon, M.** (2014). Design and evaluation of lyricons (Lyrics + Earcons) for semantic and aesthetic improvements of auditory cues. *Proceedings of the Upper Peninsula Interdisciplinary Student Research Conference (UPISRC-2014)*, p.15, MI: Houghton. Available from: <https://sites.google.com/a/mtu.edu/upirs/>
- [CA10] Lehman, W., Zhang, R., Fakhr Hosseini, S. M., **Jeon, M.**, & Park, C. H. (2014). Design of a social robot for affective recognition learning of children with autism spectrum disorders. *Proceedings of the Upper Peninsula Interdisciplinary Student Research Conference (UPISRC-2014)*, p.11, MI: Houghton. Available from: <https://sites.google.com/a/mtu.edu/upirs/>
- [CA9] Landry, S. G., Ryan, J. D., Walker, J. W., & **Jeon, M.** (2014). Gesture sonification in virtual environments. *Proceedings of the Upper Peninsula Interdisciplinary Student Research Conference (UPISRC-2014)*, p.10, MI: Houghton. Available from: <https://sites.google.com/a/mtu.edu/upirs/>
- [CA8] Fakhr Hosseini, S. M., Hardy, A., **Jeon, M.**, & Lautala, P. (2014). Driver behaviors with various visual warnings at the railroad grade crossings. *Proceedings of the Upper Peninsula Interdisciplinary Student Research Conference (UPISRC-2014)*, p.8, MI: Houghton. Available from: <https://sites.google.com/a/mtu.edu/upirs/>
- [CA7] Croschere, J., Landry, S. G., Perelman, B., **Jeon, M.**, & Lautala, P. (2014). Sonic in-vehicle auditory warnings for grade crossings interactions at immersive virtual environment. *Proceedings of the Upper Peninsula Interdisciplinary Student Research Conference (UPISRC-2014)*, p.4, MI: Houghton. Available from: <https://sites.google.com/a/mtu.edu/upirs/>
- [CA6] Bose, R., Fakhr Hosseini, S. M., Riener, A., & **Jeon, M.** (2014). Design and evaluation of the multimodal indoor wayfinding system for the visually impaired people. *Proceedings of the Upper Peninsula Interdisciplinary Student Research Conference (UPISRC-2014)*, p.2, MI: Houghton. Available from: <https://sites.google.com/a/mtu.edu/upirs/>
- [CA5] **Jeon, M.** (2011). Designing an in-vehicle affect detection and regulation interfaces (“How to effectively regulate drivers’ various affective states using auditory displays?”). The Doctoral Consortium Think Tank, *the 17th International Conference on Auditory Display (ICAD2011)*, Budapest, Hungary, June, 2011.
- [CA4] Rayan, I. A., **Jeon, M.**, & Walker, B. N. (2011). The effect of physical embodiment of an animal robot on affective prosody recognition. *Georgia Tech Research and Innovation Conference (gtRIC2011)*, Atlanta, GA, February, 8, 2011.

- [CA3] **Jeon, M.** (2010). Advanced auditory menus for universal access to electronic devices (“How to design advanced auditory menus for sighted users as well as visually impaired users?”). The Doctoral Consortium Think Tank, *the 16th International Conference on Auditory Display (ICAD2010)*, Washington, D. C, June, 2010.
- [CA2] **Jeon, M.**, Davison, B., Wilson, J., Raman, P., & Walker, B. N. (2010). Advanced auditory menus for universal access to electronic devices. *Georgia Tech Research and Innovation Conference (gtRIC2010)*, Atlanta, GA, February, 8, 2010.
- [CA1] **Jeon, M.**, Davison, B., Wilson, J., Raman, P., & Walker, B. N. (2009). Advanced auditory menus for navigation efficiency and users’ satisfaction. *The Wireless Emergency Communications State of Technology Conference*, September, 21-22, 2009, Atlanta, GA.

TECHNICAL REPORTS

- [TR6] **Jeon, M.**, Schuett, J., Winton, R., & Walker, B. N. (2011). Identification of Sound Quality Profiles for GE Home Appliances. Georgia Institute of Technology Sonification Lab Technical Report. August, 2011.
- [TR5] Bujak, K. R., Adams, A., Baranak, A. S., Beer, J. M., Burnett, J. S., Deblasio, J. M., Fausset, C. B., **Jeon, M.**, McBride, S. E., Olson, K., Smarr, C-A., & Zheng, R. (2009). Website analysis “John Deere”. Georgia Tech HFES Student Chapter Technical Report, December, 2009.
- [TR4] **Jeon, M.**, & Walker, B. N. (2009). Optimized spindex improves both acceptance and performance with auditory menus. Georgia Institute of Technology Sonification Lab Technical Report, 2009.
- [TR3] **Jeon, M.**, Gupta, S., & Walker, B. N. (2009). Advanced auditory menus II: Speech application for auditory interface. Georgia Institute of Technology Sonification Lab Technical Report. February, 2009.
- [TR2] DeBlasio, J. M., **Jeon, M.**, Walker, B. N., & Nees, M. (2009). Designing an auditory display: Report on a case study for in-vehicle use. Georgia Institute of Technology Sonification Lab Technical Report. January, 2009.
- [TR1] Jung, C. S., Oh, C. Y., Lee, J. H., & **Jeon, M.** (2004). Auditory Signal Generation Guideline. Yonsei University. Center for Cognitive Science Technical Report. February, 2004.

GRANTS

Current/Awarded

- ❖ Co-PI, Department of Transportation, Federal Railroad Administration (\$271,223), NURail (\$81,000), & Michigan Tech (\$31,000) Highway-Rail Grade Crossing Research with NDS data and driver simulator 2016 September – 2018 August Total project value (\$383,223)
- ❖ PI, Hyundai Motors Co. Novel in-vehicle interaction design and evaluation. 2016 August – 2017 May (\$130,236)
- ❖ PI, National Institutes of Health, NRI: Collaborative: Interactive robotic orchestration - music-based emotion and social interaction therapy for children with ASD 2014-2017 (\$692,074)
- ❖ Co-PI, National University Rail Center (NURail) Project, “NURail – Tier I”, US DOT-OST 2014-2017

(\$113,411)

- ❖ PI, Michigan Tech Transportation Institute, Building the ENGIN (Exploring Next Generation IN-vehicle Interfaces) Consortium at MTTI (Michigan Tech Transportation Institute), 2015-2017 (\$60,000)
- ❖ ICAD (International Conference on Auditory Display) – NSF Support Grant for Doctoral Colloquium Panel 2016 July (\$2443.83)
- ❖ Dagstuhl Seminar 16262: Automotive User Interfaces in the Age of Automation, Schloss Dagstuhl – NSF Support Grant for Junior Researchers 2016 June (\$750)
- ❖ PI, Equos Research Co., Ltd, Sonic information design for intuitive in-vehicle interactions Phase II 2015 November – 2016 March (\$33,964)
- ❖ PI, Equos Research Co., Ltd, Sonic information design for intuitive in-vehicle interactions Phase I 2015 May-September (\$35,443)
- ❖ Co-PI, National University Rail Center (NURail) Project, US DOT-OST 2012-2016 (\$788,926)
 - PI Project: Phase I-The effects of visual warnings and driver distraction on rail crossing safety: Evaluate driver response to visual cues at grade crossings in a simulated environment.
 - PI Project: Phase II-The effects of auditory warnings and driver distraction on rail crossing safety: Evaluate driver response to audio cues at grade crossings in a simulated environment.
- ❖ RA (wrote a proposal), GE Appliances, Identification of sound quality profiles for home appliances, March 2011-September 2011 (\$91,000) @Georgia Institute of Technology
- ❖ Doctoral Consortium at ICAD 2011 National Science Foundation (Travel, Registration, and Per Diem), Designing an in-vehicle affect detection and regulation interfaces
- ❖ Doctoral Consortium at ICAD 2010 National Science Foundation (Travel, Registration, and Per Diem), Advanced auditory menus for universal access to electronic devices

Pending

- ❖ Co-PI (PI: Keith Vertanen in CS, Co-PI: Scott Kuhl in CS) National Science Foundation, CHS: Small: Efficient Text Entry in Virtual and Augmented Reality
- ❖ Co-PI (PI: Hyungchul Yoon in CEE) National Science Foundation, Collaborative research: Improving undergraduate education in civil engineering through interactive cyber-physical system tools – bridging real world problems to classrooms (\$184,233 for MTU)
- ❖ Co-PI (PI: Kuilin Zhang in CEE) National Science Foundation, CPS: Collaborative Research: An Integrated Modeling Framework of Information and Vehicular Traffic in a Connected Driving Environment (\$300,000 for MTU)
- ❖ Co-PI (PI: Kevin Trewartha in CLS, Co-PI: Min Wang in Math) National Institutes of Health, The impact of mild cognitive impairment and Alzheimer's disease on short- and long-term memory processes underlying motor learning
- ❖ Co-PI (PI: Tejin Yoon in KIP, Co-PI: Yeonwoo Rho in Math) National Institutes of Health, Motor function and fatigability in middle-aged adults and the protective effects of exercise (\$463,900)

Declined

- ❖ Co-PI (PI: Tejin Yoon in KIP, Co-PIs: Shane Mueller in CLS, Yeonwoo Rho in Math) National Institutes of Health, Sex specific brain activation in the aging brain and smart app-guided exercise (\$461,428)
- ❖ Partner Investigator, Australian Research Council. Sonic information design, 2016-2019 (\$767,295.00) (in the international consortium)
- ❖ Co-PI, National Science Foundation, Engaging student learning: Design & development level I: Transdisciplinary iterative project-based learning environments (TriPLE): Pedagogy for human centered product design & development, 2016-2019 (\$579,757)
- ❖ PI, The Robert Wood Johnson Foundation, DriveCalm. 2016 July – 2017 April
- ❖ PI, Minnesota Department of Transportation (MnDOT), Development and evaluation of enhanced auditory displays for older drivers' ITS navigation. 2016-2018
- ❖ Co-PI, Microsoft Research, HoloLens Proposal: Efficient mixed reality text entry, 2016 January-December (\$100,000)
- ❖ Partner Investigator, Australian Research Council. Sonic information design, 2015-2019 (\$488,184.46) (in the international consortium)
- ❖ Co-PI, Research utilizing the SHRP2 safety data to support highway safety, 2016 January-December (\$124,791)
- ❖ PI, National Science Foundation, In-vehicle auditory interactions as countermeasures against aggressive driving: Applications for eco-driving and emotional driving, 2015-2018 (\$500,000)
- ❖ Co-PI, Michigan Department of Transportation, Association of Michigan's older crashes with roadway features, 2015-2017 (\$513,738)
- ❖ Co-PI, National Science Foundation, Engaging student learning: Design & development level I: Transdisciplinary iterative project-based learning environments (TriPLE): Pedagogy for human centered product design & development, 2015-2018 (\$595.699)
- ❖ PI, National Science Foundation, CAREER: In-vehicle affect detection and mitigation using interactive sonification, 2014 (\$596,401)
- ❖ PI, Ohio Department of Transportation, Development and evaluation of railroad-highway grade crossing traffic control devices, 2014 (\$10,000)
- ❖ PI, Michigan Technological University – Research Excellence Fund – Mentoring Grants (REF-MG), Building a mentor relationship in interactive sonification, 2013 (\$9,593)
- ❖ PI, Michigan Technological University – Research Excellence Fund – Research Seed Grants (REF-RS), Modeling and predicting driving behavior based on driver's emotions, 2013 (\$40,000)
- ❖ PI, Michigan Technological University - Century II Campaign Endowed Equipment Fund (C²E²), Establish the immersive multimodal display (visualization and sonification) studio, 2012 (\$5,000)
- ❖ Co-PI, Korean Evaluation Institute of Industrial Technology, EmoRHIP (Emotion-Responsive HRI Platform), 2012 (in total \$5,000,000 with four universities and two industry partners)

TEACHING EXPERIENCE (recent teaching evaluation score)

Received an exceptional "Average of 7 Dimensions" student evaluation score during Spring semester 2016. This score is in the top 10% of similarly sized sections across all courses/sections on campus.

- ❖ Graduate course: CS5090/PSY6991 Human-Robot Interaction, Fall 2016
- ❖ Undergraduate course: PSY2300 Developmental Psychology, Summer 2016
- ❖ Graduate seminar course: CS5090/PSY6991 Affective Design and Computing, Fall 2015 (**4.27/5.0**)
- ❖ Undergraduate course: PSY3200 Motivation and Emotion, Summer 2015, Spring 2016 (**4.64/5.0**)
- ❖ Graduate Tool course: Human Factors II-Multimodal Design and Measure Studio, Spring 2015 (**4.48/5.0**)
- ❖ Under/Graduate course of Psychology: PSY4160/5160 Sensation & Perception, Michigan Technological University, Houghton, MI, USA, Spring 2013, Spring 2014 (**4.43/5.0**), Spring 2015
- ❖ Undergraduate course: PSY3870 Human-Centered Design, Summer 2014, Fall 2014 (**4.62/5.0**)
- ❖ Under/Graduate course of Psychology: PSY3850/5850 Human Factors Psychology, Michigan Technological University, Houghton, MI, USA, Fall 2012, Fall 2013, Fall 2014, Spring & Fall 2016 (**4.63, 4.65, 4.22/5.0**)
- ❖ Graduate seminar course: PSY6991 Affective Sciences in Human Factors and Human-Computer Interaction, Fall 2013 (**4.33/5.0**)
- ❖ Summer Youth Programs for Middle/High Schoolers: "Women in Engineering" and "Engineering Scholars" for Human Factors: Distracted Driving, Michigan Technological University, Houghton, MI, USA, Summer 2013, 2014, 2015
- ❖ Under/Graduate course of Psychology: PSY4080 Human-Computer Interaction, Michigan Technological University, Houghton, MI, USA, Summer 2013
- ❖ Undergraduate course of Psychology: Sensation & Perception Lab., Georgia Institute of Technology, Atlanta, GA, USA, Spring 2012
- ❖ (Team Teaching), Undergraduate course: General Psychology, Georgia Institute of Technology, Atlanta, GA, USA, Spring 2011
- ❖ Undergraduate lecture course of Cognitive Science: Human-Computer Interaction, Yonsei University, Seoul, Korea, Fall 2007
- ❖ Teaching Assistant, Undergraduate course of Cognitive Psychology, Georgia Institute of Technology, Atlanta, GA, USA, Fall 2011
- ❖ Teaching Assistant, Graduate & Undergraduate course of Psychology: Sensation & Perception, Georgia Institute of Technology, Atlanta, GA, USA, Spring 2010-2011

INVITED TALK

- ❖ Invited Talk: "Integrating arts and sound with science and technology", at Science Pub Crawl, Keweenaw Science and Engineering Festival, Houghton, August 4th 2016
- ❖ Invited Talk: "Aesthetic Computing: Arts + Technologies" at Summer Youth Program 2016
- ❖ Invited Talk: "Aesthetic computing: Expanding representation of the computing process and perceptual

dimensions”, Institute for Pervasive Computing, Johannes Kepler University of Linz, Austria, April 2016

- ❖ Invited Talk: “Embodied Interaction as a New Paradigm in Human-Computer Interaction: Case Studies in VR, Driving, and Robotics” KIP (Kinesiology and Integrative Physiology) Department Seminar Series, Michigan Tech, Houghton, MI, February 2016
- ❖ Invited Talk: “Sound design and Sonification” IDAS (International Design School for Advanced Studies), Hong Ik University, Seoul, Korea, May 2015
- ❖ Invited Talk: “Research in the Cyber-Human Systems Center at ICC”, Graduate School of Information, Yonsei University, Seoul, Korea, May 2015
- ❖ Invited Talk: “Auditory display and Sonification” Engineering Psychology, Yonsei University, Seoul, Korea, April 2015
- ❖ Invited Talk: “Distracted driving & human factors engineering” Upper Peninsula Traffic Safety Committee Meeting, Michigan Tech, Houghton, MI, February 2015
- ❖ Invited Talk: “Affective Computing” Computer Science Department Meeting, Michigan Tech, Houghton, MI, January 2015
- ❖ Guest Lecture: “Scientific Sound Design”, Edinburgh Napier University, UK, May 2014
- ❖ APS (Association of Psychological Society) of Michigan Tech: “Auditory Psychology and Human-Computer Interaction, Michigan Tech, Houghton, MI, April 2013
- ❖ Brown Bag: “Accessible Computing based on Auditory Displays” Computer Science Department Seminar, Michigan Tech, Houghton, MI, January 2013
- ❖ Brown Bag: “Auditory Displays, Sonification and Music Technologies” ACSHF Program Brown Bag, Department of Cognitive and Learning Sciences, Michigan Tech, Houghton, MI, December 2012
- ❖ Invited Talk: “Auditory Interaction Design: Two or Three Things You Need to Know about Sonification,” HCI/UX Lecture Series, Interaction Science Institute, SungKyunKwan University, Seoul, Korea, Spring 2012
- ❖ Invited Talk: “Do Science with Soft Things,” Industrial Design Department Seminar, Korea Advanced Institute of Science and Technology, Daejun, Korea, Spring 2012
- ❖ Invited Talk: “Introduction to UX Design,” the 20th Korean Conference on Cognitive Science, Seoul, Korea, Spring 2007
- ❖ Invited Talk: “UI Design & Sound Design”, Undergraduate course of Introduction to Psychology, Yonsei University, Seoul, Korea, Spring 2007
- ❖ Invited Talk: “Interaction Design”, Undergraduate course of Cognitive Engineering Psychology, Sungkyunkwan University, Seoul, Korea, Spring 2007
- ❖ Invited Talk: “Introduction to UX Design”, Undergraduate course of Engineering Psychology, Kangwon University, Kangwon, Korea, Spring 2007
- ❖ Invited Talk: “Research Methods for Interaction Design, Undergraduate course of Information-Culture Science, Seoul National University, Seoul, Korea, Fall 2004
- ❖ Invited Talk: “Auditory Psychology”, Undergraduate course of Introduction to Psychology, Yonsei University, Seoul, Korea, Fall 2004

- ❖ Invited Talk: “Auditory Psychology”, Undergraduate course of Introduction to Psychology, Yonsei University, Seoul, Korea, Spring 2003

ADVISING & MENTORING

Mentoring Faculty at Michigan Tech

- ❖ Dr. Kevin Trewartha (Cognitive and Learning Sciences/Kinesiology and Integrative Physiology), Fall 2016 – Present
- ❖ Dr. Keith Vertanen (Computer Science), Fall 2015 – Present

Visiting Scholars at Michigan Tech

- ❖ Doyoung Park (Chief Researcher & Sound Designer, Hyundai Motors Company), Fall 2016 – Spring 2017
- ❖ Dr. Andreas Riener (Computer Science, University of Linz, Austria), Fall 2013
- ❖ Samantha Jansen (Human Factors Program at Wichita State University), Summer 2013

Graduate Students at Michigan Tech

Full time Graduate Students

- ❖ Eric Vasey (Computer Science MS), Summer 2016 – Present
- ❖ Ridwan Ahmed Khan (Computer Science PhD), Fall 2015 – Present
 - Selected for the **Doctoral Colloquium/ travel supported by NSF** at ICAD 2016 Conference
- ❖ Jaclyn Barnes (Computer Science PhD), Fall 2014 – Present
 - Selected for the **Doctoral Consortium/ travel supported by ACM ASSETS** 2015 Conference
- ❖ Seyedeh Maryam "Shabnam" FakhrHosseini (Human Factors PhD), Fall 2013 – Present
 - Selected for the **Doctoral Colloquium** at **ACM AutomotiveUI** 2016 Conference
 - Received the **Outstanding Scholar Award** at Michigan Tech Graduate School 2016 Spring
 - Received the **Graduate Student Conference Scholarship (\$1,100)** at IEEE JRC 2015 Conference
 - Selected for the **Doctoral Colloquium/ travel supported by NSF** at ICAD 2014, 2105 Conferences
- ❖ Jason Sterkenberg (Human Factors PhD), Spring 2013 – Present
 - Received MS in ACSHF at Michigan Tech 2015
 - Selected for the **Doctoral Colloquium** at **ACM AutomotiveUI** 2014 Conference
 - Selected for the **Doctoral Colloquium/ travel supported by NSF** at ICAD 2016 Conference
- ❖ Steven Landry (Human Factors PhD), Fall 2013 – Present
 - Received MS in ACSHF at Michigan Tech 2016
 - Selected for the **Doctoral Colloquium/ travel supported by NSF** at ICAD 2014, 2015 Conferences
 - Received the **Graduate Student Conference Scholarship (\$1,100)** at IEEE JRC 2016 Conference
- ❖ Jayde Croschere (Human Factors MS), Fall 2014 – Summer 2015
- ❖ Yuanjing Sun (Human Factors MS), Fall 2013 – Summer 2016

Part time Graduate Students

- ❖ James Walker (Computer Science PhD), Summer 2013 – Present
- ❖ Ruimin Zhang (Computer Science PhD), Fall 2013 – Spring 2016
- ❖ Wei Zhang (Human Factors PhD), Fall 2012

Undergraduate Students at Michigan Tech

- ❖ Matthew Banka (Computer Science), Spring 2017 – Present
- ❖ Braiden Chappell (Psychology), Spring 2017 – Present
- ❖ Kenneth Ritz (Psychology & Physics), Spring 2017 – Present
- ❖ Yuguang Wang (Computer Engineering), Spring 2017 – Present
- ❖ Elis Brehob (Psychology), Spring 2017 – Present
- ❖ Dylan Lettinga (Computer Science), Fall 2017 – Present
- ❖ Samantha Verran (Psychology & Computing), Spring 2016 – Present
- ❖ Qinzhe “Justin” Zhang (Computer Engineering), Spring 2016 – Fall 2016
- ❖ Ryan Brendel (Computer Science), Summer 2016
- ❖ Eric Vasey (Computer Science), Fall 2015 – Spring 2016
- ❖ Joshua Johnson (Computer Science), Fall 2015 – Present
- ❖ Amber Varacalli (Computer Engineering), Summer 2015 – Present
- ❖ David Brown (Sound Design and Psychology), Summer 2015 – Present
- ❖ Paul Kirby (Sound Design and Computer Science), Fall 2014 – Summer 2015
- ❖ Zackery Duford (Computer Science), Fall 2014 – Present
- ❖ David Tascarella (Computer Science), Fall 2014 – Present
- ❖ Jayde Croschere (Psychology), Fall 2013 – Summer 2014
- ❖ Joseph Ryan (Computer Science & Psychology), Fall 2013 – Present
- ❖ Will Lehman (Psychology), Summer 2013 – Summer 2014
- ❖ Rahul “Neil” Bose (Mechanical Engineering), Fall 2013 – Present
- ❖ Matthew Vaught (Computer Science & Computer Engineering), Fall 2013 – Present
- ❖ Abbey Westphal (Psychology), Spring 2013 – Summer 2013
- ❖ Paula Castilho de Mendonca (ECE), Spring 2013
- ❖ Shaun McKeehan (ECE), Spring 2013
- ❖ Kayla Harter (Psychology), Fall 2012

Mentoring at Georgia Tech

- ❖ Master’s Projects: Charita Williams (2011), Ruby Zheng (2011), Robert Jason (2011), Siddhart Gupta (2010), Anya Kogan (2009), Sonification lab, Georgia Institute of Technology
- ❖ Undergraduate’s Project: Yarden Moskovitch (2009) GT President’s Undergraduate Research Award (PURA) program

PROFESSIONAL SERVICE

Journals

- ❖ **Associate Editor**, *MIT Journal Presence: Teleoperations and Virtual Environments*, since 2015
- ❖ **Guest Editor**
 - Ergonomics in Design*, Special Issue on Sonic Information Design, 2017-2018
 - MIT Journal Presence*, Special Issue on Arts, Aesthetics, and Performance in VR and Telepresence, 2016-2017
 - Pervasive and Mobile Computing*, Special Issue on The social car: Socially- inspired mechanisms for future mobility services, 2013-2014
 - MIT Journal Presence*, Special Issue on Subliminal/ unaware cues and perception of presence in virtual, telepresence, automotive environments, 2013-2014
- ❖ **Journal Reviewer**
 - IEEE ITS Transactions* (2017), *ACM Computing Surveys* (2016), *Journal of the HCI Society of Korea* (2016), *IEEE Multimedia* (2014, 2016), *Transportation Research Part F: Traffic Psychology and Behaviour* (2015, 2016), *International Journal of Human-Computer Interaction* (2015, 2016), *International Journal of Human-Computer Studies* (2016), *Displays* (2015, 2016), *Autonomous Robots* (2015), *Accident Analysis and Prevention* (2015), *International Journal of Vehicle Design* (2015), *Transportation Research Part C: Emerging Technologies* (2014), *The International Journal of Design in Society* (2014), *Journal of Pervasive Computing* (2013), *Journal of Experimental Psychology: Applied* (2011-present)

Grants & Books

- ❖ **Review Panel**, NSF Cyber-Human Systems medium (sense making + viz + cognition + HRI), 2017
- ❖ **Reviewer**, Research ND (North Dakota) state grant proposal on transportation technologies, 2016
- ❖ **Book Proposal Reviewer**, *Eco-driving: From driving strategies to driver interfaces*, CRC Press/Taylor and Francis (2016), *Emotions and Telehealth*, Elsevier (2014)

Conferences

- ❖ **Program Chair**
 - Installation Program, *ICAD 2017 Conference*, Video Program, *AutomotiveUI 2017 Conference*, Interactive Poster & Demo Program, *AutomotiveUI 2011 Conference*
- ❖ **Invited Attendee** of Dagstuhl Seminar 16262: “Automotive User Interfaces in the Age of Automation”, Schloss Dagstuhl, Germany, 2016
- ❖ **Affective Design Technical Committee**, *International Ergonomics Association*, 2015-2018
- ❖ **Conference Program Committee**
 - ACM/IEEE/IFIP *International Conference on Collaboration Technologies and Systems (CTS)*: “Special Session on Intelligent Cooperative Driving and Autonomous Connected Vehicles (ICD & ACV)” (2014 – Present), *ACM AutomotiveUI* (2011 – Present), *ACM AutomotiveUI Doctoral Consortium* (2013 – Present), *ACM Mobile HCI* (2008 – Present), *ICAD* (International Conference on Auditory Display) (2012 – Present)

❖ **Invited Panel**

Doctoral Colloquium “Think Tank” international panel, *International Conference on Auditory Display (ICAD)* (2016), “Advances of Research in Affective Processes in Communication and Collaboration” *the 59th Annual Meeting of the Human Factors and Ergonomics Society (HFES)* (2015), “Collection and Analysis of Physiological Measures in Driving Research” *the 59th Annual Meeting of the Human Factors and Ergonomics Society (HFES)* (2015), “Affective Design and EQUID: Emotional and Ergonomic Quality in Product Design and Development” *the 19th Triennial Congress of the International Ergonomics Association (IEA)* (2015)

❖ **Tutorial Organizer**, “In-vehicle auditory interactions: Design and application of auditory displays, speech, sonification, & music”, *AutomotiveUI2016 Conference*

❖ **Workshop (Co)-Organizer**

“Ethically inspired user interfaces for decision making in automated driving”, *AutomotiveUI2016*

“Were are we bound for? Persuasion in Transport Applications”, *Persuasive Technology 2016*

The 3rd Workshop on “User Experience of Autonomous Driving”, *AutomotiveUI 2015*

“Practical Experiences in Measuring and Modeling Drivers and Driver-Vehicle Interactions”, *AutomotiveUI 2015*

“In-vehicle Auditory Interactions”, *ICAD 2015*

“Developing Partnership and Advancing Driving Research”, *Michigan Tech*, 2015

“Social, Natural, and Peripheral Interactions: Separate and Together,” *AutomotiveUI 2014*

“Sonic Information Design: Framework, Approach, and Application,” *ICAD 2014*

Joint Workshop on “Natural UI’s and Socially-inspired Mobility Services,” *AutomotiveUI 2013*

“Social Cars (socially-inspired C2X interaction),” *AutomotiveUI 2012*

“Methodical Approaches to Prove the Effects of Subliminal Perception in a Ubiquitous Computing Environment,” *UbiComp 2012*

“Research Methods for Assessing Auditory Displays,” *ICAD 2012*

“Subliminal Perception in Cars,” *AutomotiveUI 2011*

❖ **Session Chair**

Research on Speech & Driving: Together & Separate, PPTG (Perception and Performance Technical Group): at *the 57th Annual Meeting of the Human Factors and Ergonomics Society (HFES)* (2013)

Interactive Movement Sonification Session at the *18th International Conference on Auditory Display (ICAD)* (2012)

Acoustics and Speech Session, PPTG (Perception and Performance Technical Group): at *the 55th Annual Meeting of the Human Factors and Ergonomics Society (HFES)* (2011)

❖ **Reviewer**

ISWC (International Symposium On Wearable Computers) (2016), *ACM CHI* (Conference on Human Factors in Computing), (2010 – Present), *ACM SUI* (Symposium on Spatial User Interaction) (2014), *IEEE RO-MAN* (International Symposium on Robot and Human Interactive Communication) (2016), *ACM EICS* (Engineering Interactive Computing Systems) (2014), *ISIEA* (IEEE Symposium on Industrial Electronics and Applications)

(2012) *HFES* (Human Factors and Ergonomics Society International Annual Meeting) (2011-present)
PPTG (Perception and Performance Technical Group), 2011 – Present

Committee & Other Services

- ❖ **Reviewer, SURF** (Summer Undergraduate Research Fellowships) 2014, 2017
- ❖ **Tenure & Promotion Committee**, College of Sciences and Arts, 2016-2017
- ❖ **Digital Measures Improvement Committee**, College of Sciences and Arts, 2016
- ❖ **Graduate Program Committee**, Computer Science Graduate Program, 2015 – Present
- ❖ **Graduate Program Committee/Chair**, Applied Cognitive Science and Human Factors Graduate Program, 2012 – Present
- ❖ **Faculty Search Committee**, Department of Cognitive and Learning Sciences, 2013
- ❖ **Research Qualifying Examination Committee**, James Walker (Computer Science, 2013), Bochao Lee (Computer Science, 2015), Michigan Technological University
- ❖ **Dissertation/Thesis Committee**, Kay Tislar (ACSHF MS, 2016), Avinash Subramanian (CS MS, 2016), Hannah Bosseler (ACSHF MS, 2016), Bochao Li (CS PhD, 2016), Ruimin Zhang (CS PhD, 2015), Brandon Perelman (ACSHF PhD, 2014), & James Walker (CS PhD, 2014), Michigan Technological University
- ❖ **Dissertation Committee (External Reviewer)**, Ahmad Soleimani's PhD Dissertation (Computer Science), "Fuzzy computational model for emotion regulation based on affect control theory", School of Computer Science, University of Windsor, Canada, 2015
- ❖ **Dissertation Committee (International Reviewer)**, Pablo Revuelta Sanz's PhD Dissertation (Electrical and Computer Science), "ATAD: Assistive Technology for an Autonomous Displacement", Informática y Tecnología electrónica, Universidad Carlos III de Madrid, Spain, 2013
- ❖ **Project Evaluator**, for John Rigby's (Sound Design) "Designing Blended Spaces for Smart Tourism", Edinburgh Napier University, UK, 2013

AWARDS

- ❖ **Exceptional Graduate Mentor Award Nomination by the Graduate Student Government**, Michigan Tech, 2017
- ❖ **Best Student Paper Award** at ICAD Conference, Australia, 2016
- ❖ **Best Paper Award** at the ArtsIT Conference, Denmark, 2016
- ❖ **Best Poster Abstract Paper Award** at the 15th HCI International Conference, USA, 2013
- ❖ **Best Student Paper Award** for the PPTG (Perception and Performance Technical Group) at the 53rd Annual Meeting of the Human Factors and Ergonomics Society, USA, October 19-23, 2009
- ❖ ICAD Doctoral Student Consortium "ThinkTank", Travel Funds, USA, 2010, 2011
- ❖ Saehan Scholarship, Saehan Presbyterian Church, USA, 2009, 2010

- ❖ **IF Communication Design Award** (Digital Media: Interface), Personal Navigation Device User Interface, Germany, 2007
- ❖ **Korean Ergonomic Design Award**, Air Conditioner UI/AUI Design, Korea, 2007
- ❖ Digital Appliance President Award, UD (Universal Design) Project, LGE, 2006
- ❖ First Prize Recipient of the LG Group Freshman Education, LGE, 2005
- ❖ The Division Commander Award, the Korean Army, 2000, 2001, 2002
- ❖ Highest Honors Student with Scholarship, Yonsei University, 1997, 1999
- ❖ High Honors Student with Scholarship, Yonsei University, 1996, 1998

PATENT

[P3] (Submitted) SPINDEX (Speech Index for Auditory Display of Menu Items)

[P2] NAVIGATION SYSTEM AND METHOD FOR PROVIDING TURN-BY-TURN INSTRUCTIONS (2009).

Patent number: US20090171578 A110-2007-0033396 (2007.04.04), IPC G08G1/0968

[P1] NAVIGATION DEVICE AND METHOD OF CONTROLLING THE SAME (2009). Patent number:

US20090306891 A1

PROFESSIONAL AFFILIATIONS

- ❖ ACM (Association for Computing Machinery)
- ❖ HFES (Human Factors and Ergonomics Society)
- ❖ APA (American Psychology Association) & Division 21 (Division of Applied Experimental & Engineering Psychology)
- ❖ ICAD (International Community for Auditory Display)

MEDIA MENTIONS

- ❖ ACM Magazine “*Interactions*” Mind Music Machine Lab, Michigan Tech 2017
<http://interactions.acm.org/enter/view/mind-music-machine-lab-michigan-tech>
- ❖ Michigan Tech Blog, The Sounds of Safer Driving
2016 <http://www.mtu.edu/news/stories/2016/november/sounds-safer-driving.html>
- ❖ BBC 4Tech, August 2016, UK
- ❖ Michigan Tech Blog, Unscripted: Science and Research, “Where science and art meet: The mind music machine,” March, 2016 <http://www.mtu.edu/unscripted/stories/2016/march/where-science-art-meet-mind-music-machine.html>
- ❖ Podcast in Distillations Magazine (12 minute interview), “Episode 198: Old Brains, New Brains: The

Human Mind, Past and Present,” May. 2015, USA

<https://www.chemheritage.org/distillations/podcast/old-brains-new-brains-the-human-mind-past-and-present>

- ❖ Michigan Tech Alumni NEWS letter, “World Usability Day Event”, Various projects, Nov. 2013, USA
- ❖ Georgia Radio Reading Service (GaRRS) "Assistive TECH" Radio Shows, Affect Detection Project, Nov.-Dec. 2011, USA
- ❖ MedStar Television on Electronic Driving Coach 2011, USA
- ❖ Georgia Radio Reading Service (GaRRS) "Assistive TECH" Radio Shows, Auditory Menus Project, 01/01/2010, USA
- ❖ Dong-A Daily Newspaper “Go beyond consumers’ five senses,” 07/2007, Korea
- ❖ Dong-A Daily Newspaper “We make! Sound designer & tactile designer,” 02/2007, Korea

SOFTWARE DEVELOPMENT

- ❖ “M.U.S.I.C. – Motion and Sonification Mapping Software”: Java
- ❖ “Facial Expression Detection and Sonification Generation” App: Objective C & Java
- ❖ “immersive Interactive Sonification Platform” (iISoP): Java (JFugue) for sonifier and C for visualizer
- ❖ “Interactive Sonification Markup Language” (ISML): XML
- ❖ “Aquarium Fugue” Sonification: Java & Max/MSP for sonification and Processing for GUI
- ❖ “Interactive Drum Circle”: Java
- ❖ “Auditory Menu Library”: Java
- ❖ “Psychological Experiments Set”, Yonsei University: Visual C