

## Kichol Lee, Ph.D.

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Dr. Lee is a research assistant professor of Industrial and Systems Engineering (ISE) at Virginia Tech. He is a manager of Auditory Systems Lab at Virginia Tech. He also is chief scientist of *Hearing, Ergonomics & Acoustics Resources (HEAR) LLC*, a Virginia company that conducts product design/testing, intellectual property assistance, research contracts, and litigation support, including human factors expert witness services.

Dr. Lee received a B.S. in Mechanical Engineering (1995) at University of Texas at Austin. He received a M.S. in Computational Science (2000) at San Diego State Univ. He received a Ph.D. in Industrial and Systems Engineering with concentrations in Human Factors Engineering at Virginia Tech. He received a UPS fellowship award. He joined the ISE department as a research assistant professor in 2013. Dr. Lee also taught various classes: Introduction to Human Factors, Industrial Ergonomics, and Engineering Economy.

As a research faculty and as a consultant (2011-Current), Dr. Lee conducted numerous research projects from U.S. government agencies and industrial companies. Test/training system developments, hearing protection device evaluation per ANSI standard, acoustic device design, and rapid prototyping are examples of the research project topics. During most of the project, he designed and conducted human factors experiments. He also conducted human factors experiment and measured data for subject matter expert report for several litigation cases. As a manufacturing engineer (1995-2000) of a new Samsung plant in Tijuana, Mexico, Dr. Lee worked with other engineers to prepare work-specifications for production workers and incoming specifications for raw materials inspectors. He tested new machines and alternative work procedures to decrease defect rates in a plant that had continuous 24-hour production. He also earned a green belt in Six Sigma and applied statistical process control techniques to stabilize yield rate of the production. He also translated Korean technical manuals/books written by engineers at Samsung Research division.

Dr. Lee has research interest in human factors, ergonomics, product safety, acoustics/hearing protection and auditory situation awareness. Current research project concerns a training/testing system development for auditory situation awareness tasks.

### Sample Publications:

Cave, K. M., Thompson, B., Lee, K. and Casali, J. G. Optimization of an auditory azimuth localization training protocol for military service members. *International Journal of Audiology*, 2019, 59, Suppl 1, 1708-8186.

Lee, K. and Casali, J. G. Learning to localize a broadband tonal complex signal with advanced hearing protectors and TCAPS: The effectiveness of training on open-ear vs. device-occluded performance. *International Journal of Audiology*, 2019, 58, Suppl 1, 3-11.

Casali, J. G. and Lee, K. Auditory Situation Awareness: The conundrum of providing critical aural cues while simultaneously protecting hearing, with implications for training. *Spectrum*, 2018, 35(3), 12-28.

Lee, K. and Casali, J. G. Development of an auditory situation awareness test battery for advanced hearing protectors and TCAPS: Detection subtest of DRILCOM (Detection-Recognition/Identification-Localization-Communication). *International Journal of Audiology*, 2017, 56, Suppl 1, 22-33.

Lee, K. and Casali, J. G. Effects of low speed wind on the recognition/identification and pass-through communication tasks of auditory situation awareness afforded by military hearing protection/enhancement devices and tactical communication and protective systems. *International Journal of Audiology*, 2016, 55, 1-9.