

3rd International Conference on Driver Distraction and Inattention

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Co-organisers: SAFER and UNSW

KEYNOTE SPEAKER ABSTRACT 3:

Title:

Distraction, Inattention, and Monitoring: Some Observations from Aviation Research

Keynote Speaker:

PhD Asaf Degani, General Motors R&D, Israel

Abstract: Distraction and inattention of operators (such as pilots, controllers, and technicians) is a serious problem in high-risk industries, especially when associated with the use of automation. As operators' role changes from manual involvement in the control loop to monitoring -- ample opportunities open up to engage in other activities.

To further compound the problem, monitoring of automated systems, as opposed to being kinesthetically involved, makes it difficult to comprehend and keep track of the system's state. Consequently, we see situations where operators have difficulty returning back into the control loop when the automatic system has become inoperable, incapable, or has made an unacceptable response.

I will begin this talk by illustrating and elucidating these automation monitoring problems with several examples from airline operations. We will then focus our attention on specific countermeasures involving interface design and training for monitoring to alleviate some of these problems.

The talk will conclude with a discussion about the need and process to formulate a manufacturer's automation philosophy and its implications for automation design, training, and operations.

Background: Asaf Degani is a Technical Fellow at General Motor's R&D center in Israel. His research focuses on developing design methods and specification schemes for HMI systems, with special emphasis on automated driving. He is also involved in research in the areas of adaptive automation, visualization, and interface design.

Prior to joining GM Israel he was with NASA Ames where he conducted research on airline cockpit automation, procedure/checklist design, organization of information, and formal methods.

Links:

<http://ti.arc.nasa.gov/profile/adevani/>

<http://careers.gm.com/worldwide-locations/asiamiddle-east/israel.html>