

TRACK 5: INNOVATION AND APPLICABLE TECHNOLOGY**“AUTOMATING THE VISUAL INSPECTION OF AIRCRAFT”**

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ABSTRACT

During pre-flight inspection, technical competency is required to identify obstructions and observable damage that may impact the airworthiness of the aircraft. This can be challenging for the ground crew who may be limited by time, manpower, or limited views of an aircraft. In this presentation, we describe an R&D project that is designed to visually inspect the surface of aircraft using commercially available cameras. Providing a high-level description, our presentation will touch on some of the approaches used to identify different types of surface defects, including how this information is visualized back to the end user. The goal of this research is to work towards a more automated process of inspection using computer vision solutions. Subsequently, with an industry focused on reducing manpower and operational costs, the ability to automate the detection and documentation of aircraft defects is a relevant and timely issue.

BIOGRAPHY OF SPEAKER

Since 2010, Dr Mark Rice has been a scientist at the Institute for Infocomm Research. Research areas have varied from interactive memory aids and cognitive learning, to the use of augmented intelligence in wearable computing. Mark holds a PhD in Applied Computing, and has written over 30 research publications in journals and international conferences. He currently leads an A*STAR Aerospace project on aircraft inspection.