

Research Centre  
for  
Integrated Transport Innovation (rCITI)  
Web Seminar

**Web Seminar Link:** <https://unsw.zoom.us/j/8493874422>  
**Date/Time:** Thursday, 29 October 2020, 12:30pm - 1:00pm  
**Title:** Robust aircraft conflict resolution



**PRESENTER: Fernando Dias**  
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**Bio:**

Fernando H. C. Dias is PhD candidate in transport engineering under the supervision of Dr. David Rey at the University of New South Wales and member of Research Centre for Integrated Transport Innovation. He received his undergraduate degree in Systems Engineering from Federal University of Minas Gerais in 2017. His major research interest include mathematical modelling, optimization models, air traffic conflict detection and resolution problem.

**Abstract:**

Air traffic control (ATC) is a dynamic process that operates in a relatively constrained environment. Many of those restrictions are based on limited information and response time, that demands that any decision is taken in a few seconds. Using different uncertainty sets, we present a formulation for aircraft conflict separation problem (ACRP) incorporating the uncertainty. As a result, we showed that for conditions where randomness effects that are categorizing within 5%, the proposed methods are capable of providing a feasible solution that is

comparable to deterministic formulation in terms of complexity and execution time under the same set of parameters.