

*Student
Seminar*

Pi Mu Epsilon

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Old Mathematics in New Aircraft:
Finding Your Place in the World with CPR

by Aaron Dutle
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Aaron Dutle

The Compact Position Reporting (CPR) algorithm is one part of the Automatic Dependent Surveillance - Broadcast (ADS-B) protocol for aircraft communication. This protocol enables aircraft to share information, i.e., position and velocity, with traffic aircraft in their vicinity. This talk will describe the mathematics behind the CPR algorithm, and how NASA researchers used formal methods to find and fix the requirements for guaranteeing its proper use.

Dr. Aaron Dutle is a Research Computer Scientist working in the Safety-Critical Avionics Systems Branch at NASA's Langley Research Center since 2014. He currently specializes in Formal Methods in Computer Science, and particularly their use in aerospace applications. He received his Ph.D in Mathematics from the University of South Carolina in 2012 under Dr. Joshua Cooper, and remained at the university for two years as a postdoctoral researcher under Drs. Éva Czabarka and László Székely.

Tuesday 27th March 2018
7:00 pm
LC 412

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