

Formal Verification, Distributed Computing, and Path Planning Algorithms

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The safety- and mission-critical nature of much of the work done at NASA requires algorithms and software to be exceedingly reliable. Formal methods techniques are one way of ensuring this high level of robustness. This talk will discuss the development and formal verification of autonomous aircraft path planning algorithms related to the Bellman-Ford shortest path algorithm, including consideration of distributed computation of the algorithm.

Keywords: path planning, Bellman-Ford, Formal Methods, Distributive Computing