

## **Functional interior point programming applied to the aircraft path planning problem**

Multiple aircraft trajectory planning is a central problem in future air traffic management concepts where some part of the separation task, currently assumed by human controllers, will be delegated to on-board automated systems. Several approaches have been taken to address it and fall within two categories: meta-heuristic algorithms or deterministic methods. The framework proposed here models the planning problem as a optimization program in a space of functions with constraints obtained by semi-infinite programming. A specially designed innovative interior point algorithm is used to solve it.