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## Parallel calculations in optimal control problem

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We consider the problem of choice of angle of attack and bank by a device which is slowed down in the atmosphere for the flight on the minimum of maximum heat with constraints on the value of full loading factor. The solution of mentioned problems allows to determine maneuver abilities of the device. The constraints on full loading factor (control-state constraint), the lift force coefficient (control), constraints on the bank, typical device area, the drag force coefficient, mass, the boundary conditions are parameters. For the solution proposed problem we use two stages approaches. On the first stage we determine geometry of optimal trajectory on inequality constraints. Here we solve a non-linear programming problem with the help of factor analysis. On the second stage we verify received solution by the maximum principle in the form of Dubovitsky-Milyutin. For all proposed algorithms we use parallel calculations.

### Short biography note

Vasily Dikumar is Professor, Doctor of Physical and Mathematical Sciences, Chief Researcher of the Dorodnitsyn Computing Center FRC CSC RAS.

Nicholas Olenev is Docent, PhD, Senior Resercher of the Dorodnitsyn Computing Center FRC CSC RAS.

Marek Wojtowicz is Docent, PhD, Uniwesytet Technologiczho-Humanistyczny im. Kazimerza Pulaskiego w Radomiu, Poland

**Primary author:** Prof. DIKUSAR, Vasily (Dorodnitsyn Computing Centre, FRC CSC RAS)

**Co-authors:** Dr WOJTOWICZ, Marek (Uniwesytet Technologiczho-Humanistyczny im. Kazimerza Pulaskiego w Radomiu, Poland); Dr OLENEV, Nicholas (CC FRC CSC RAS)

**Presenter:** Prof. DIKUSAR, Vasily (Dorodnitsyn Computing Centre, FRC CSC RAS)

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