

TeFeNICA 2020 Topics

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Engineering Support Sector



**TEMPERATURE
STABILISATION
SYSTEMS**

Engineering Support

Topics



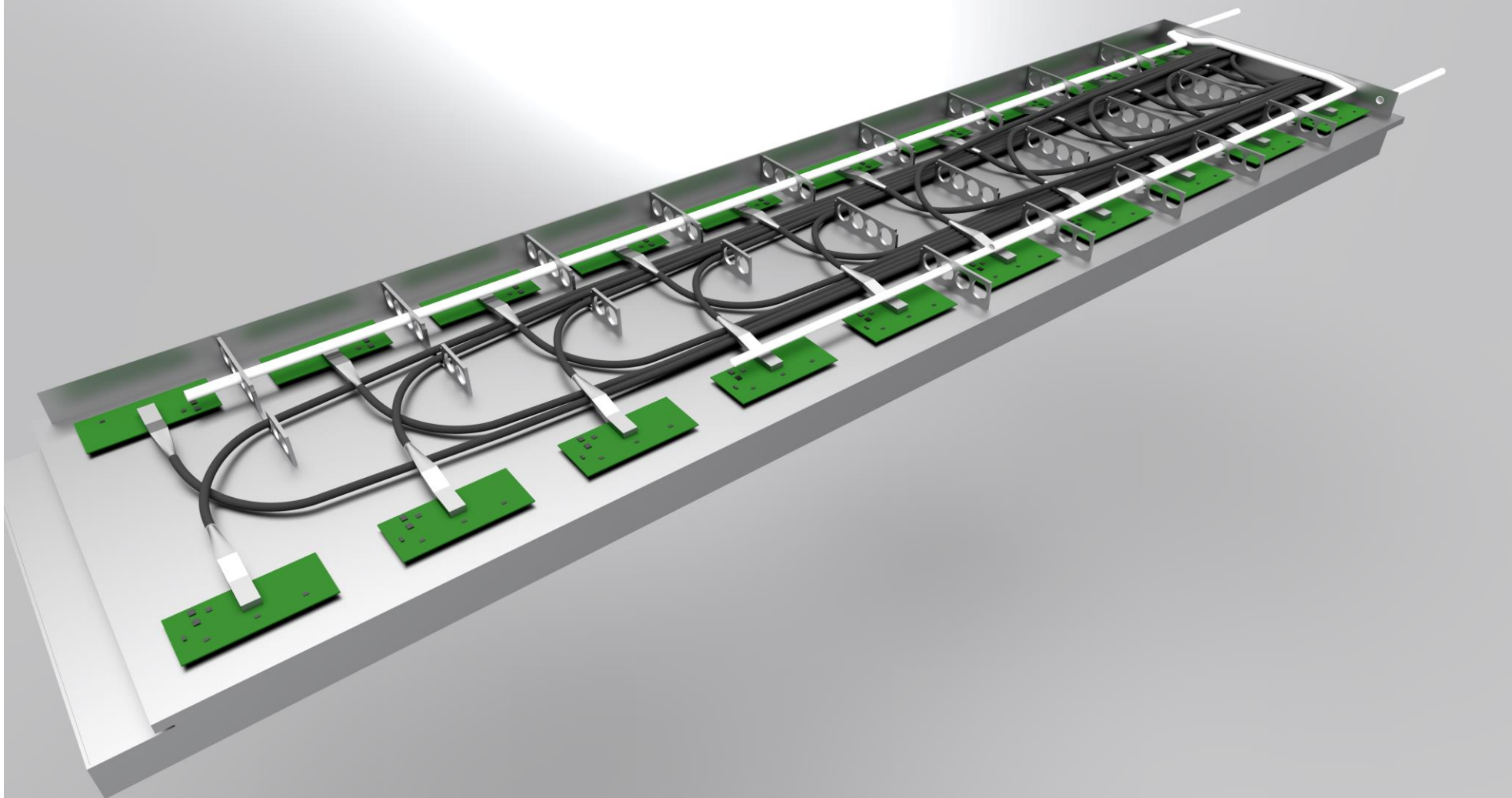
- Heat transfer simulation of the cooling system for NICA-MPD-Platform RACK cabinet
- Thermal optimization of the "Intelligent Power Distributor" using the CFD method.

Why heat transfer simulation

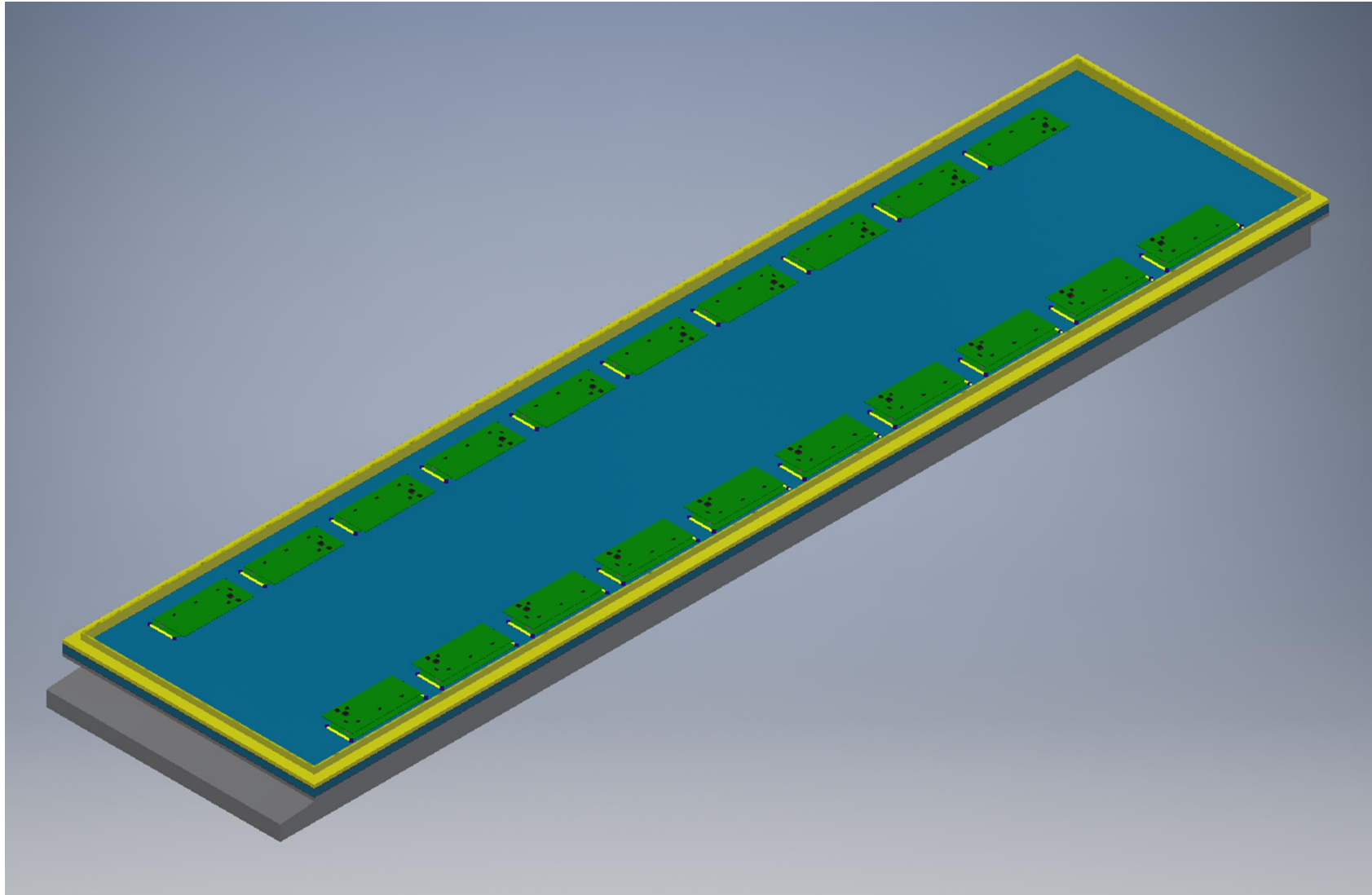


- Temperature stability (overheating)
- Temperature gradient
- Investigation of flow
- Others problem

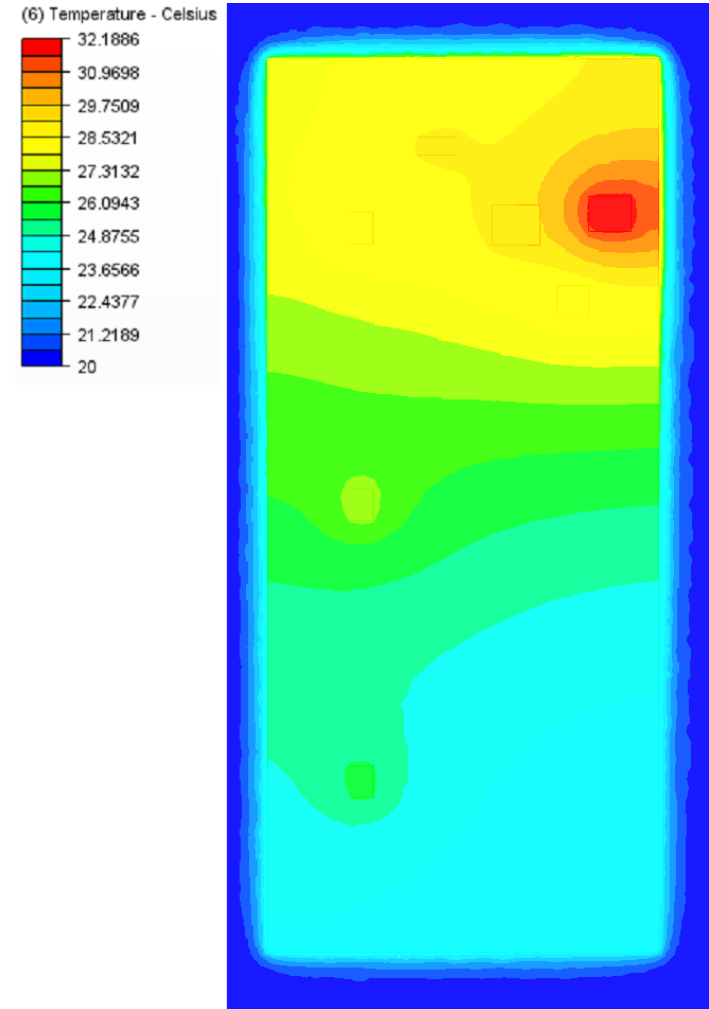
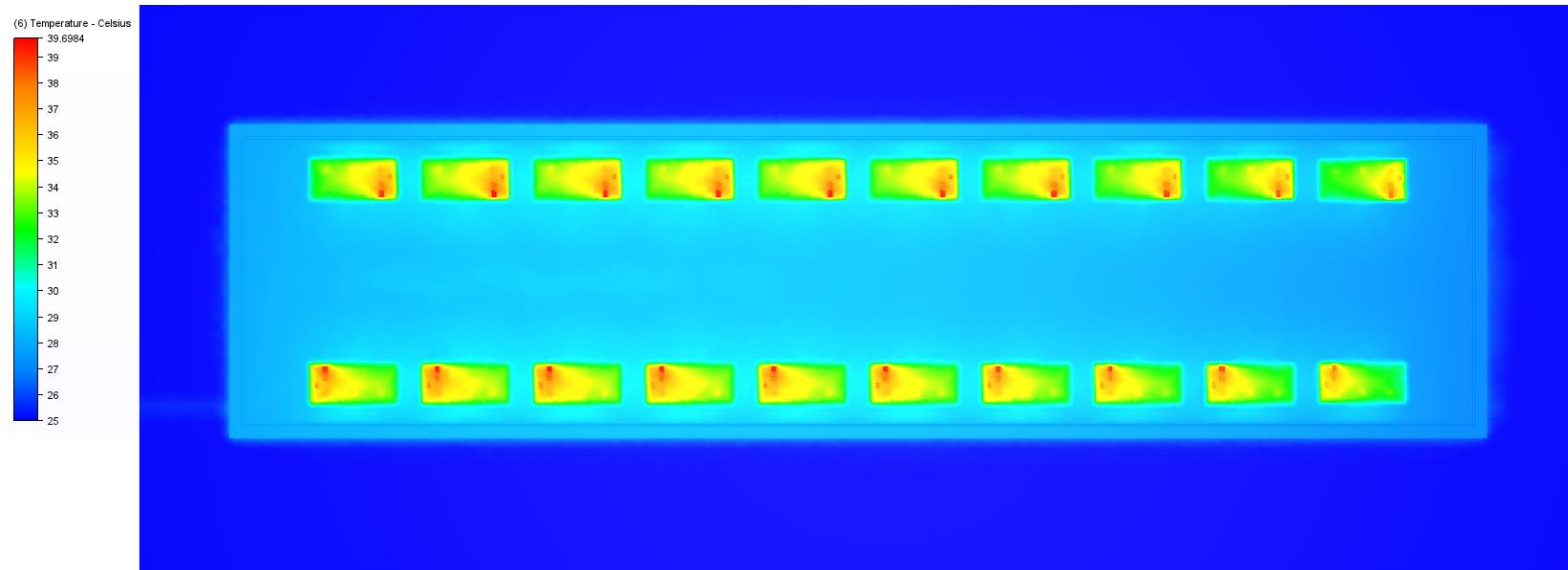
Why heat transfer simulation



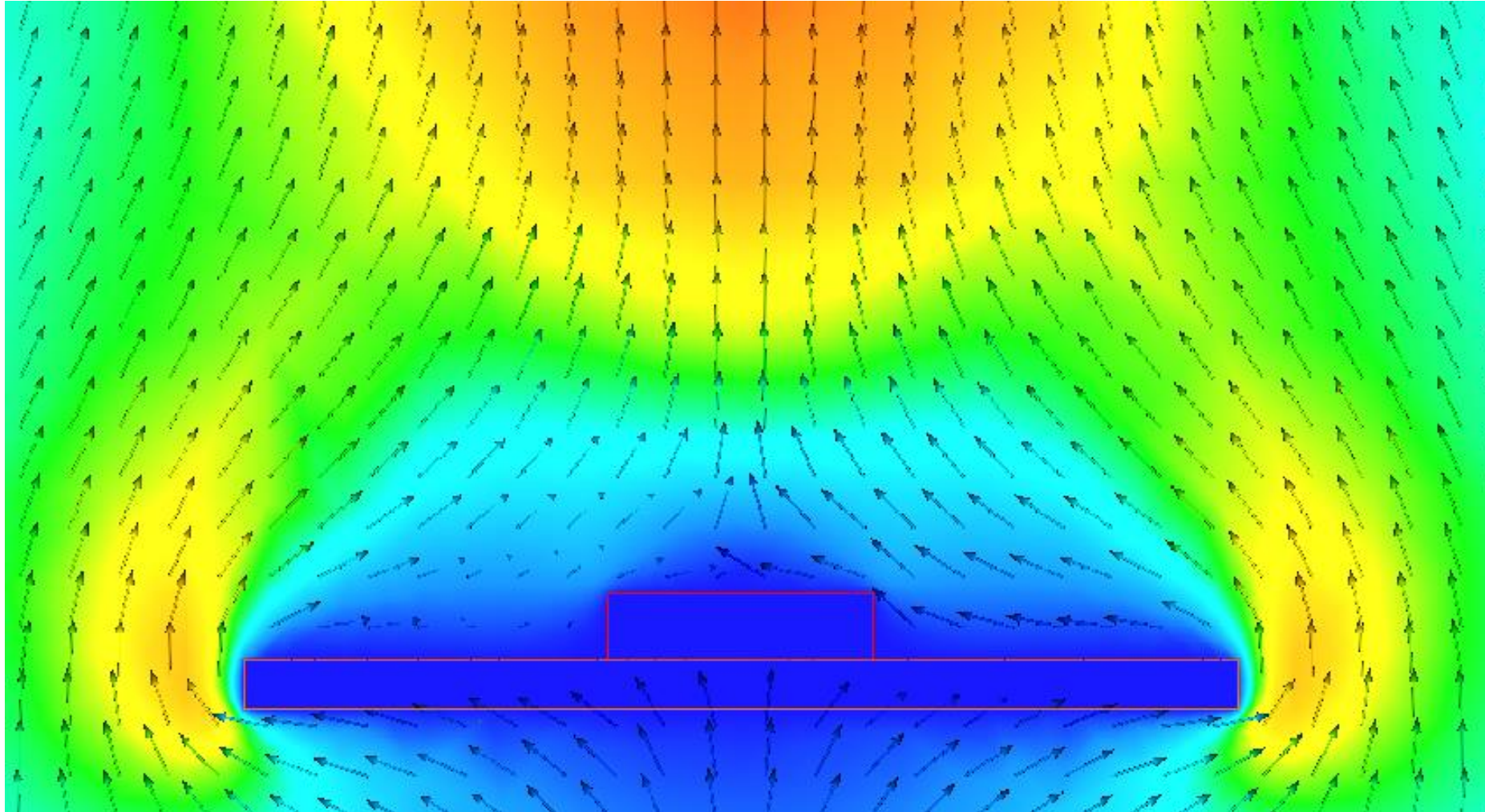
Why heat transfer simulation



Why heat transfer simulation



Simulation for the MPD-TOF





Heat transfer simulation of the cooling system for NICA-MPD-Platform RACK cabinet

The main goal of this internship topic is to conduct heat transfer simulation for the NICA-MPD-Platform RACK cabinet which using a new cooling system. Exactly for a set of two RACKs and one cooling cabinet. During the practice, student get skills of preparing the simply 3D model and conduct heat transfer simulation for it. Moreover, the student gets an overview of the whole NICA-MPD-Platform project and the issue of temperature stability.



Thermal optimization of the "Intelligent Power Distributor" using the CFD method

The main goal of this internship topic is to conduct heat transfer simulation for Intelligent Power Distributor (IPD) in a few variants of the construction. Base on the simulation optimal variant of construction will be chosen. During the practice, student get skills of preparing the simply 3D model and conduct heat transfer simulation for it. Moreover, the student gets an overview of the whole NICA-MPD-Platform project and the issue of temperature stability.

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