Voluntary Work/ Study Project / Thesis

Investigation of battery cooling systems with porous media

The Chair of Aeroengine Design (FTD) is seeking master's students with a background in mechanical/ aerospace/ electrical engineering for a collaborative research with Pusan National University (PNU), South Korea on topics related battery thermal management in electrified aircrafts.

Expected qualifications:

- Good knowledge on fluid mechanics, heat transfer, computational methods and porous media.
- Fair understanding of electrical and mechanical components in electrified aircrafts.
- Proficient working skills with commercial CFD tools (e.g. ANSYS Fluent).
- Understanding of 0D thermal modelling and ability to work with MATLAB.
- Willingness to work in a collaborative scientific environment.
- Technical writing skills to support and contribute in research publications.

What we offer:

- Working in an international team.
- Joint supervision by PNU and FTD members.
- Possibility of a short research stay at Pusan National University.
- Possibility of extending the research as a master thesis
- Co-authoring research papers for conferences and scientific journals.



Illustration of battery cell cooling with porous media (Bashiri et al. 2022)



> Is this something you would like to work on?

Kindly send an email to <u>dikshant.sharma@b-tu.de</u>, including your CV and transcripts. Application deadline: **09.06.2025**



Brandenburgische Technische Universität Cottbus - Senftenberg

