

Fluids and Space Engineering Seminar

Date: Thursday, June 8, 2023 at 14:15 h

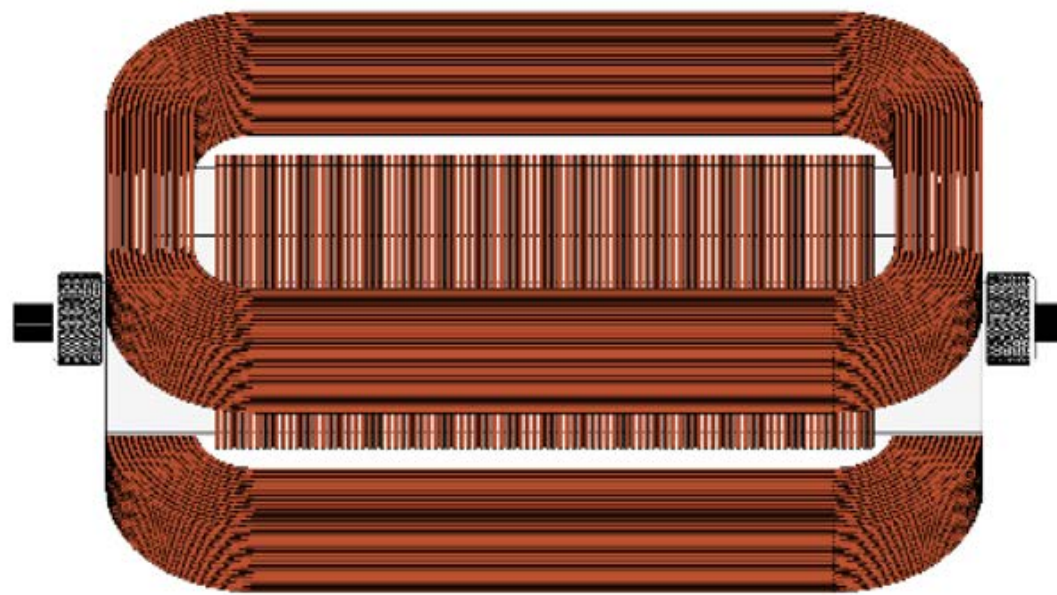
Location: ZARM, Room 1730

FERMIUM

Ferrohydrodynamic Pump in Microgravity

Thomas Imhülse

University of Bremen, Center of Applied Space Technology and Microgravity
(ZARM)



Proof of concept

A future requirement of autonomous spacecraft, landers and rovers is greatly increased dynamic on-board computing power and energy demand. This requires a robust, powerful and adaptive cooling system to handle the waste heat from the CPU and other subsystems.

A ferrohydrodynamic (FHD) pump, based on the effect of magnetic free surface stress, will be iteratively developed by ZARM and ZARM Technik AG for this purpose.