

The master thesis proposals by M. Axel Coussement

- Analysis of different energy scenarios for Europe to design a serious game for the BA3 thermodynamics course
- Design of a tilt rotor, closed wing drone
- Modification of a 5kW piston engine for pure hydrogen operation.
- Analysis of flame radiation using machine learning algorithm to develop reduced CFD models
- Numerical simulations of sustainable aviation fuels for high speed propulsion
- Numerical simulations of new hybrid (electrical/ hydrogen) furnaces to negate the carbon footprint of the industry. (2 thesis, one on Multiple Hearth Furnaces, one on slab reheating furnaces)
- Implementation of simulation tools for automatic gearbox control **!!!! WILL BE COUPLED WITH AN INTERNSHIP AT AW EUROPE !!!**
- Numerical studies of multi compartments fire training doll house - **in collaboration with Brussels Fire Department**