

Master Thesis



Non-exhaust emissions (brake, tire, and road wear) are currently responsible for up to 85% of traffic-related PM₁₀ particulate matter emissions. With the introduction of the new Euro 7 emission standard, brake emissions will be regulated for the first time worldwide.

Brake Wear Particle Emissions

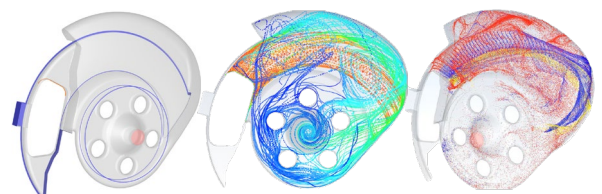
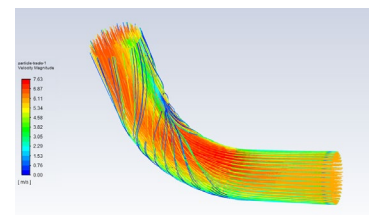
CFD simulation of particle emissions and optimization of an existing prototype

Scope of Thesis:

1. Familiarization with previous FTG studies on RDE brake emission measurement
 - Analysis, interpretation, and preparation of existing measurement results
2. CFD optimization of the existing prototype using our developed CFD model
3. Adaptation of the existing prototype based on CFD results
4. Test planning and execution of emission measurements on the test bench or RDE
5. Evaluation, interpretation, and documentation of the results

Requirements:

- Independent, methodical, careful, and transparent approach
- Interest in vehicles and skill in data visualization
- Desired programming knowledge – Concerto
- CAD and CFD experience is a plus



Duration: approx. 6 months
Start date: available immediately
Workplace: provided by the institute
Compensation: scholarship of € 3000

<http://ftg.tugraz.at>

Contact: DI Michael Huber ☎ +43 316 873 – 35240 ✉ michael.huber@avl.com
peter.fischer@tugraz.at