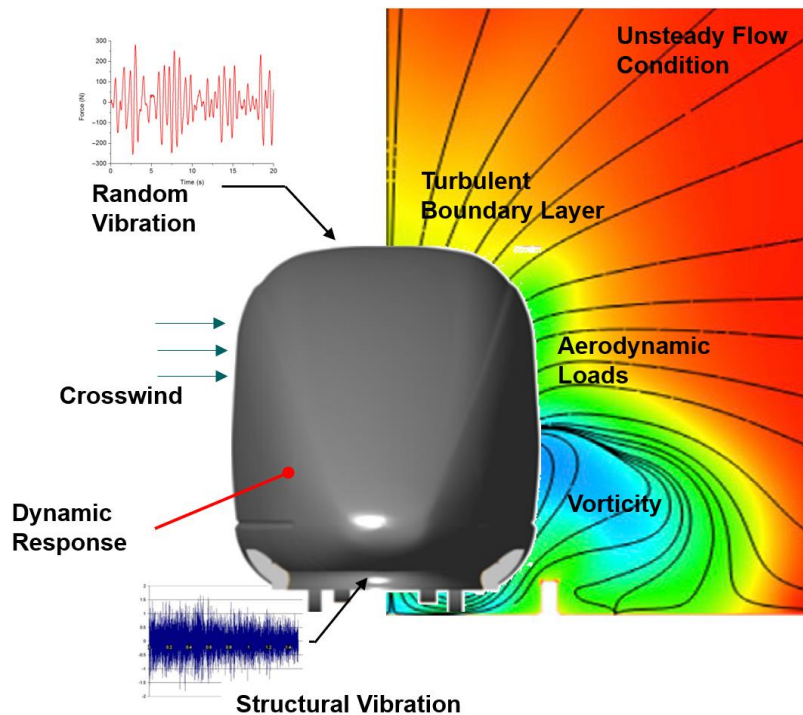




Student Master Thesis

Application of cutting-edge technology for

Simulation of High-Speed Rail Vehicles using Multi-Physics



Background

In the development of today's high-speed trains, new materials and techniques are increasingly being used to make the structure lighter, cost efficient, and at the same time more robust. This requires a detailed analysis of the loads that occur during operation. Increasingly, methods are being used that go beyond a classic structural mechanics analysis. Therefore, coupled simulations that analyze the interaction of the wheel-rail system and highly accurate vortex dominated aerodynamic effects are included in the design.

Do you feel ready to collaborate on this exciting topic, please **contact us!**

Tasks

- Simulation of dynamic response to low and high frequency vibrational loads
- Develop and validate simulation models using multi-physics
- Support of our project team and work on complex rail vehicle components

Your profile

- Completed bachelor's degree in mechanical, structural or civil engineering
- Good knowledge of fundamental structural mechanics and aerodynamics
- Programming skills (MATLAB, Python)
- Experience with Hypermesh is an advantage

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