



## **Guest Seminar**

### ***Coupling Exterior Design Elements with Aerodynamics: A Brief Overview on Drag Behavior in Ground Vehicles***

***Dr. Emir Öngüner***  
***German Aerospace Center (DLR)***  
***Institute of Aerodynamics and Flow Technology, Göttingen***

**Date:**

***30. January 2020, Thursday, 10:30 a.m.***

**Location:**

***von Karman Institute for Fluid Dynamics, Brussels***

As a result of increasing demand of energy efficiency in ground transportation, the aerodynamic aspects gain priority with respect to previous decades. Important attributes as greenhouse gas emissions, limited oil resources and recent competitive electric cars with rechargeable batteries keep the energy and fuel consumption in focus. The drag, crosswind stability, cooling of propulsion and transmission, lift distribution, wind noise and surface soiling... etc. are some significant aerodynamic features which directly interact with the exterior design elements of ground vehicles.

Within this seminar it is aimed at giving a general overview on the historical development and practical applications of aerodynamics on ground vehicles.