

# Emissions of Elemental Carbon in Particulate Matter from Diesel engines

## Background

Particulate matter causes a severe threat to human health and the environment. Although legislations from ground vehicles (using internal combustion engines) are coming into place, there are many other sources. From a working environment perspective, new legislation including “diesel particulates” will be enforced 2023<sup>1</sup>. This legislation will put new requirements on both monitoring techniques as well as emissions reduction for workers.



This MSc thesis project is a collaborative project which combines diesel engine technology and aerosol chemistry to get increased knowledge for all stake holders involved in the new legislation

## Project description and objectives

The project will be mainly experimental and includes two different topics

- To compare and evaluate measurement techniques based on filter-sampling vs. direct sampling methods in an engine test rig (at Chalmers, M2, Combustion and Propulsion Systems)
- To perform field measurements (at GU, AMM) using portable equipment and compare with engine rig results.

If time allows, a Chemical analysis of the collected particulates will be performed.

## Students

We seek two highly motivated students (preferably with different backgrounds) with knowledge in Combustion and Aerosol Science. You are meticulous and skilled in both data analysis and report writing.

## Contact:

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<sup>1</sup> Arbetsmiljöverket. Konsekvensutredning till förslaget om ändring i Arbetsmiljöverkets föreskrifter om hygieniska gränsvärden. 20200331