

# Gas engine control

PhD students: Being recruited

Natural gas as well as biogas are attractive fuels for spark ignition engines due to abundance, low price and low CO<sub>2</sub> emissions. Large variation in fuel properties however limits the achievable efficiency. Both methane number and Wobbe index can vary quite substantially depending on the source of the gas and engine control systems have to be designed based on worst case.

Ion current measurement using the spark plug and the ignition system provides a non-intrusive way to monitor the combustion and e.g. detect knock and determine combustion phasing. This project is about using ion current measurements combined with advanced signal processing and control methods in order to make spark ignited gas engines more efficient and robust to fuel variations.

