



EINLADUNG ZUM VORTRAG

von Herrn

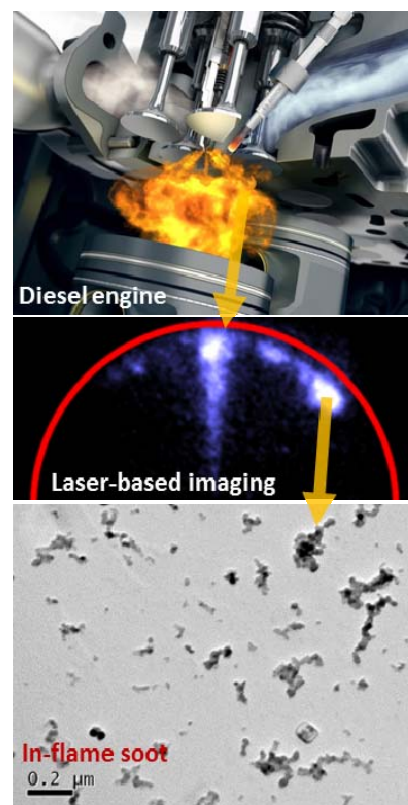
Associate Professor Shawn Kook

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mit dem Thema

Aerosol formation inside the cylinder of the engine

One of our primary research goals at the UNSW Engine Research Laboratory is enhanced understanding of soot particle structures within the flame in high-pressure transient combustion environments – i.e. diesel engines. To clarify the sooting flame development, various optical/laser-based imaging diagnostics are performed in an optically accessible diesel engine, which include high-speed imaging of hot soot luminosity, intensified imaging of cool flame and hydroxyl radical (OH^*) chemiluminescence, planar laser-induced fluorescence (PLIF) imaging of fuel and OH and incandescence imaging of soot (soot-PLII). In the same engine, soot particles are sampled directly from the diesel flame by means of thermophoresis and analysed using transmission electron microscopy (TEM) to clarify their size distribution and morphology. This seminar introduces these experimental approaches and some of the major findings made based on the image analysis.



Datum: Mittwoch, 12. April 2017

Beginn: 09:00 Uhr

Ort: Hörsaal ISW (MFEG210), Inffeldgasse 25/F

About the presenter:

Prof. Shawn Kook's expertise lies in optical/laser-based imaging diagnostics in challenging engine environments, advanced combustion strategies and alternative fuels in diesel/petrol engines as well as soot particle morphology. Before joining UNSW in 2009, he received research training at Sandia National Laboratories (Postdoc in 2007-09) and KAIST (PhD in 2006). He has authored more than 140 journal/conference papers, including a paper that received the 2005 SAE Horning Memorial "Best Paper" Award and the 2016 SAE Outstanding Oral Presentation Award. Since 2011, Kook has led 9 major funded projects worth more than \$2.5 million from the Australian Research Council, Department of Industry and Science, US Navy and US Army.

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<https://research.unsw.edu.au/projects/engines>