

SPRING 2017 SEMINAR SERIES

LAST SEMINAR OF THE SEMESTER

Thursday, May 18, 2017

4:15 pm

Building 36, Room 112

Refreshments at 4:00

Presented By:

Jan Baron

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Topic:

Cycle-to-Cycle Variability of DISI Gasoline Engines

Abstract:

The GM LTG engine – operated as a single cylinder – was used to investigate the influence of certain operating conditions on the cycle-to-cycle combustion variability. Preliminary results show a strong dependence of the NIMEP's variability on the combustion phasing. Variability in NIMEP can also be observed for fixed combustion phasing and needs to be investigated further.

A characteristic relationship between the flame development angle, the rapid burning angle and the combustion phasing was observed over a wide range of operating parameters. Additionally, the variability in cylinder pressure can be related to the burn rate, practically independently of combustion phasing.