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SI-Turb predictive combustion model

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SEAR– Energy and flow simulations – System Performance Simulation

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SiTurb predictive combustion model

- The goal of the activity is a fully validated 1D SiTurb model in GTSuite using turbulence data from 3D CFD and experimental data from single cylinder C13.
- **Proposed approach:**
 - Analysis of the available experimental data and specify required input
 - Calibration of the SiTurb predictive combustion model and NOx emissions, and comparison with CFD.
 - Prediction of cycle-to-cycle variation
 - Knock prediction and calibration on a cycle-by-cycle basis
 - Calibration of the detailed full engine model.
 - Application of the predictive model to a new combustion chamber geometry and compare with measurement and CFD combustion output..

