



REWARD

REal World Advanced Technologies foR Diesel Engines

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- 1 - AVL - AVL List GmbH - AT
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- 3 - VCC - Volvo Car Corporation - SE
- 4 - CRF - CRF SCpA - IT
- 5 - CNRIM - Istituto Motori – Consiglio Nazionale delle Ricerche (CNR) - IT
- 6 - JM - Johnson Matthey Plc - UK
- 7 - RIC - Ricardo Plc - UK
- 8 - SCF - Schaeffler Technologies AG & Co. KG - DE
- 9 - LMM - Le Moteur Moderne - FR
- 10 - DELPHI - Delphi Automotive Systems Luxembourg S.A. - LU
- 11 - UNR - Uniresearch BV - NL
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- 13 - VIF - Virtual Vehicle Research Center - AT
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Executive summary

The control strategies detailed in this document can drive a Diesel engine comprising High Pressure and Low Pressure EGR circuits, a turbocharger equipped with Variable geometry actuator and a high pressure injection system. The model-based approach allows the control algorithm to handle new driving cycle used in RDE context comprising numerous transient phases with very high dynamics. Pollutant emissions are narrowed to their steady-state levels and engine-out NOx emissions are significantly reduced. Results presented in this work are obtained by simulation.