Record Nr. UNINA9910299619603321 Autore Blanco-Rodriguez Dr.-Ing. David **Titolo** Modelling and Observation of Exhaust Gas Concentrations for Diesel Engine Control / / by Dr.-Ing. David Blanco-Rodriguez Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 3-319-06737-0 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (197 p.) Collana Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053 Disciplina 629.253 Soggetti Transportation **Engines** Machinery Control engineering Air pollution **Engine Technology** Control and Systems Theory Atmospheric Protection/Air Quality Control/Air Pollution Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "Doctoral Thesis accepted by Universitat Politecnica de Valencia, Spain." Includes bibliographical references at the end of each chapters. Nota di bibliografia Nota di contenuto Introduction -- Sensors and models for NOx -- Adaptive filtering for observing NOx -- Conclusions and future works -- Appendix --Bibliography. The book presents a complete new methodology for the on-board Sommario/riassunto measurements and modeling of gas concentrations in turbocharged diesel engines. It provides the readers with a comprehensive review of the state-of-art in NOx and lambda estimation and describes new important achievements accomplished by the author. These include: the online characterization of lambda and NOx sensors: the development of control-oriented models of lambda and NOx emissions; the design of computationally efficient updating algorithms; and, finally, the application and evaluation of the methods on-board. Because of its technically oriented approach and innovative findings on

both control-oriented algorithms and virtual sensing and observation,

this book offers a practice-oriented guide for students, researchers and professionals working in the field of control and information engineering.