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Descrizione fisica	1 online resource (891 pages) : illustrations
Disciplina	629.244
Soggetti	Systems engineering Automobiles - Power trains
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	Challenges of powertrain development in automotive Systems engineering methodology Systems engineering initiatives in automotive Automotive use cases and applications Future perspectives
Sommario/riassunto	The book brings together all aspects of systems engineering methodology. It presents a line-up of the challenges in the field of automotive powertrain development, a detailed analysis and assessment of the actual methodology status and new methods, systems engineering initiatives in automotive as well as automotive use cases and applications. The following applications in the powertrain are covered: hybrid powertrain systems, passenger car engines, heavy duty engines and industrial engines, transmissions, batteries, fuel cells, exhaust gas aftertreatment systems and electrical-axles. A special and unique feature of this book will be the aspect of hardware test and development systems, which is in direct interaction to the systems engineering approach. In the final part the future perspective is shown in assorted characteristics. Relevant boundaries for this view are the expected trend to higher complexity, variant and configuration management, connected systems, challenge of specific legislation and laws, global engineering, supplier collaboration, development and production networks, interdisciplinary challenges for the digital development process and shorter life cycles, model based development

of mechatronic systems, degree of abstraction, serviceability management, internal communication, required IT standards and tool networking, production interaction and product life cycle management.