Record Nr. UNINA9910437774103321 Autore Ogunsola Ade Titolo Electromagnetic compatibility in railways: analysis and management // Ade Ogunsola and Andrea Mariscotti Berlin; ; New York, : Springer, c2013 Pubbl/distr/stampa **ISBN** 9786613924544 9781283612098 1283612097 9783642302817 3642302815 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (544 p.) Collana Lecture notes in electrical engineering, , 1876-1100 ; ; 168 Altri autori (Persone) MariscottiAndrea 621.382/24 Disciplina Soggetti Electromagnetic compatibility Electric railroads - Design and construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Railway traction systems -- Signalling and Communication systems 108 Nota di contenuto -- EMC Management 191 -- EMC Assurance -- Standards and standardization -- Applied Electromagnetic Theory -- Earthing, bonding and cable layout. Sommario/riassunto A railway is a complex distributed engineering system: the construction of a new railway or the modernisation of a existing one requires a deep understanding of the constitutive components and their interaction, inside the system itself and towards the outside world. The former covers the various subsystems (featuring a complex mix of high power sources, sensitive safety critical systems, intentional transmitters, etc.) and their interaction, including the specific functions and their relevance to safety. The latter represents all the additional possible external victims and sources of electromagnetic interaction. EMC thus starts from a comprehension of the emissions and immunity characteristics and the interactions between sources and victims, with a

> strong relationship to electromagnetics and to system modeling. On the other hand, the said functions are achieved and preserved and their relevance for safety is adequately handled, if the related requirements

are well posed and managed throughout the process from the beginning. The link is represented by standards and their correct application, as a support to analysis, testing and demonstration.