1. Record Nr. UNINA9910404087103321 Autore Valdemar Fernandes Jose **Titolo** Modelling and Simulation of Sheet Metal Forming Processes MDPI - Multidisciplinary Digital Publishing Institute, 2020 Pubbl/distr/stampa **ISBN** 3-03928-557-2 Descrizione fisica 1 online resource (254 p.) History of engineering and technology Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto The numerical simulation of sheet metal forming processes has become an indispensable tool for the design of components and their forming processes. This role was attained due to the huge impact in reducing time to market and the cost of developing new components in industries ranging from automotive to packing, as well as enabling an improved understanding of the deformation mechanisms and their interaction with process parameters. Despite being a consolidated tool, its potential for application continues to be discovered with the continuous need to simulate more complex processes, including the integration of the various processes involved in the production of a sheet metal component and the analysis of in-service behavior. The quest for more robust and sustainable processes has also changed its deterministic character into stochastic to be able to consider the scatter in mechanical properties induced by previous manufacturing processes. Faced with these challenges, this Special Issue presents scientific advances in the development of numerical tools that improve the prediction results for conventional forming process, enable the

development of new forming processes, or contribute to the integration

of several manufacturing processes, highlighting the growing

multidisciplinary characteristic of this field.