Record Nr. UNISA996466557103316 German Success Stories in Industrial Mathematics [[electronic resource] **Titolo** /] / edited by Hans Georg Bock, Karl-Heinz Küfer, Peter Maass, Anja Milde, Volker Schulz Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-030-81455-6 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (173 pages) Mathematics in Industry, , 2198-3283;; 35 Collana 650.01510943 Disciplina Soggetti Mathematics - Data processing Computer software Mathematical models Mathematical optimization Discrete mathematics Computational Science and Engineering Mathematical Software Mathematical Modeling and Industrial Mathematics Optimization **Discrete Mathematics** Matemàtica financera Llibres electrònics Alemanya Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Preface -- Keynotes -- Energy -- Engineering -- Food and Beverages -- Life Sciences and Health -- Mobility -- Optimization. Sommario/riassunto This book should illustrate the impact of collaborations between mathematics and industry. It is both an initiative of and coordinated by the German Committee for Mathematical Modeling, Simulation and Optimization (KoMSO). This publication aims at comparing the state of the art at the intersection of mathematics and industry, as well as the

demands for future development of science and technology in Germany

and beyond. Each contribution addresses the importance of mathematics in innovation by means of introducing a successful cooperation with an industrial partner in order to display the wide range of industrial sectors where the use of mathematics is the crucial factor for success, but also show the variety of mathematical areas involved in these activities. The success stories introduced in this volume will be supplemented by appropriate illustrations. It is the goal of this publication to highlight cooperation between mathematics and industry as a two-way technology and knowledge transfer, providing industry with solutions and mathematics with new research topics and inspiring new methodologies.