1. Record Nr. UNINA9910254285603321 Scientific Computing and Algorithms in Industrial Simulations Titolo [[electronic resource]]: Projects and Products of Fraunhofer SCAI // edited by Michael Griebel, Anton Schüller, Marc Alexander Schweitzer Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-319-62458-X Edizione [1st ed. 2017.] 1 online resource (VIII, 376 p. 40 illus. in color.) Descrizione fisica Disciplina 004 Soggetti Computer mathematics Numerical analysis Algorithms Computer software Mathematical models Computational Science and Engineering **Numerical Analysis** Mathematical Software Mathematical Modeling and Industrial Mathematics Lingua di pubblicazione Inglese Formato Materiale a stampa Livello bibliografico Monografia Includes bibliographical references at the end of each chapters. Nota di bibliografia Sommario/riassunto The contributions gathered here provide an overview of current research projects and selected software products of the Fraunhofer Institute for Algorithms and Scientific Computing SCAI. They show the wide range of challenges that scientific computing currently faces, the solutions it offers, and its important role in developing applications for industry. Given the exciting field of applied collaborative research and development it discusses, the book will appeal to scientists, practitioners, and students alike. The Fraunhofer Institute for Algorithms and Scientific Computing SCAI combines excellent research

and application-oriented development to provide added value for our partners. SCAI develops numerical techniques, parallel algorithms and

specialized software tools to support and optimize industrial simulations. Moreover, it implements custom software solutions for production and logistics, and offers calculations on high-performance computers. Its services and products are based on state-of-the-art methods from applied mathematics and information technology.