Record Nr. UNINA9910407739003321 Advances in Design, Simulation and Manufacturing III: Proceedings of **Titolo** the 3rd International Conference on Design, Simulation, Manufacturing: The Innovation Exchange, DSMIE-2020, June 9-12, 2020, Kharkiv, Ukraine - Volume 1: Manufacturing and Materials Engineering / / edited by Vitalii Ivanov, Justyna Trojanowska, Ivan Pavlenko, Jozef Zajac, Dragan Perakovi Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 **ISBN** 3-030-50794-7 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (588 pages) Lecture Notes in Mechanical Engineering, , 2195-4364 Collana Disciplina 670.42 Manufactures Soggetti Materials Computer-aided engineering Machines, Tools, Processes Materials Engineering Computer-Aided Engineering (CAD, CAE) and Design Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Comparative Analysis of Platforms for Designing a Digital Twin --Computer-Integrated Design Pistons with the Influence of Casting Defects -- Improvement of the Effectiveness of General Engineering Courses Using Trainers -- Modeling of Spindle Node Dynamics Using the Spectral Analysis Method -- Method of Design of Interference Fit Based on Complex Mathematical Modeling. This book reports on topics at the interface between manufacturing Sommario/riassunto and materials engineering, with a special emphasis on design and simulation issues. Specifically, it covers the development of CAx technologies for product design, the implementation of smart manufacturing systems and Industry 4.0 strategies, topics in technological assurance, numerical simulation and experimental

studies on cutting, milling, grinding, pressing and profiling processes,

as well as the development and implementation of new advanced materials. Based on the 3rd International Conference on Design, Simulation, Manufacturing: The Innovation Exchange (DSMIE-2020), held on June 9-12, 2020 in Kharkiv, Ukraine, this first volume in a two-volume set provides academics and professionals with extensive information on the latest trends, technologies, challenges and practice-oriented lessons learned in the above-mentioned areas.