1. Record Nr. UNINA9910360850603321

Titolo	Progress in Industrial Mathematics at ECMI 2018 / / edited by István Faragó, Ferenc Izsák, Péter L. Simon
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-27550-7
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (605 pages)
Collana	The European Consortium for Mathematics in Industry ; ; 30
Classificazione	TVU
Disciplina	620.00151
Soggetti	Mathematical physics
	Mathematical optimization
	Probabilities
	Discrete mathematics
	Data structures (Computer science)
	Optical data processing
	Mathematical Physics
	Optimization
	Probability Theory and Stochastic Processes
	Discrete Mathematics
	Data Structures and Information Theory
	Computer Imaging, Vision, Pattern Recognition and Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	PART I: Modeling of industrial processes -- PART II: Biological and medical models and applications -- PART III: Novel numerical methods for industrial mathematics -- PART IV: Optimization and control of industrial problems -- PART V: Processing and using measurements data in industrial problems -- Author index.
Sommario/riassunto	This book explores mathematics in a wide variety of applications, ranging from problems in electronics, energy and the environment, to mechanics and mechatronics. The book gathers 81 contributions submitted to the 20th European Conference on Mathematics for Industry, ECMI 2018, which was held in Budapest, Hungary in June

2018. The application areas include: Applied Physics, Biology and Medicine, Cybersecurity, Data Science, Economics, Finance and Insurance, Energy, Production Systems, Social Challenges, and Vehicles and Transportation. In turn, the mathematical technologies discussed include: Combinatorial Optimization, Cooperative Games, Delay Differential Equations, Finite Elements, Hamilton-Jacobi Equations, Impulsive Control, Information Theory and Statistics, Inverse Problems, Machine Learning, Point Processes, Reaction-Diffusion Equations, Risk Processes, Scheduling Theory, Semidefinite Programming, Stochastic Approximation, Spatial Processes, System Identification, and Wavelets. The goal of the European Consortium for Mathematics in Industry (ECMI) conference series is to promote interaction between academia and industry, leading to innovations in both fields. These events have attracted leading experts from business, science and academia, and have promoted the application of novel mathematical technologies to industry. They have also encouraged industrial sectors to share challenging problems where mathematicians can provide fresh insights and perspectives. Lastly, the ECMI conferences are one of the main forums in which significant advances in industrial mathematics are presented, bringing together prominent figures from business, science and academia to promote the use of innovative mathematics in industry.