

1. Record Nr.	UNINA9910784700803321
Autore	Fritsching Udo <1959->
Titolo	Spray simulation : modelling and numerical simulation of sprayforming metals // Udo Fritsching [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2004
ISBN	1-107-14556-2 1-280-45787-2 9786610457878 0-511-18548-0 0-511-18465-4 0-511-18728-9 0-511-31345-4 0-511-53664-X 0-511-18635-5
Descrizione fisica	1 online resource (xiv, 272 pages) : digital, PDF file(s)
Disciplina	671.7/34
Soggetti	Metal spraying - Mathematical models Metal spraying - Computer simulation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. 245-269) and index.
Nota di contenuto	; 1. Introduction -- ; 2. Spray forming of metals -- ; 2.1. The spray forming process -- ; 2.2. Division of spray forming into subprocesses -- ; 3. Modelling within chemical and process technologies -- ; 4. Fluid disintegration -- ; 4.1. Melt flow in tundish and nozzle -- ; 4.2. The gas flow field near the nozzle -- ; 4.3. Jet disintegration -- ; 5. Spray -- ; 5.1. Particle movement and cooling -- ; 5.2. Internal spray flow field -- ; 5.3. Spray-chamber flow -- ; 5.4. Droplet and particle collisions -- ; 6. Compaction -- ; 6.1. Droplet impact and compaction -- ; 6.2. Geometric modelling -- ; 6.3. Billet cooling -- ; 6.4. Material properties -- ; 7. An integral modeling approach -- ; 8. Summary and outlook.
Sommario/riassunto	Spray forming combines the metallurgical processes of metal casting and powder metallurgy to fabricate metal products with enhanced

properties. This book provides an introduction to the various modelling and simulation techniques employed in spray forming, and shows how they are applied in process analysis and development. The author begins by deriving and describing the main models. He then presents their application in the simulation of the key features of spray forming. Wherever possible he discusses theoretical results with reference to experimental data. Building on the features of metal spray forming, he also derives common characteristic modelling features that may be useful in the simulation of related spray processes. The book is aimed at researchers and engineers working in process technology, chemical engineering and materials science.

2. Record Nr.	UNINA9910829809203321
Titolo	Flexibility and robustness in scheduling [[electronic resource] /] / edited by Jean-Charles Billaut, Aziz Moukrim, Eric Sanlaville
Pubbl/distr/stampa	London ; ; Hoboken, NJ. : ISTE/John Wiley & Sons, 2008
ISBN	1-118-62339-8 1-282-16522-4 9786612165221 0-470-61143-X 0-470-39404-8
Descrizione fisica	1 online resource (351 p.)
Collana	Control systems, robotics and manufacturing series
Altri autori (Persone)	BillautJean-Charles <1967-> MoukrimAziz SanlavilleEric
Disciplina	658.5/3 658.53
Soggetti	Production scheduling
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Flexibility and Robustness in Scheduling; Table of Contents; Preface; Chapter 1. Introduction to Flexibility and Robustness in Scheduling; 1.1. Scheduling problems; 1.1.1. Machine environments; 1.1.2.

Characteristics of tasks; 1.1.3. Optimality criteria; 1.2. Background to the study; 1.3. Uncertainty management; 1.3.1. Sources of uncertainty; 1.3.2. Uncertainty of models; 1.3.3. Possible methods for problem solving; 1.3.3.1. Full solution process of a scheduling problem with uncertainties; 1.3.3.2. Proactive approach; 1.3.3.3. Proactive/reactive approach; 1.3.3.4. Reactive approach
 1.4. Flexibility 1.5. Robustness; 1.5.1. Flexibility as a robustness indicator; 1.5.2. Schedule stability (solution robustness); 1.5.3. Stability relatively to a performance criterion (quality robustness); 1.5.4. Respect of a fixed performance threshold; 1.5.5. Deviation measures with respect to the optimum; 1.5.6. Sensitivity and robustness; 1.6. Bibliography; Chapter 2. Robustness in Operations Research and Decision Aiding; 2.1. Overview; 2.1.1. Robust in OR-DA with meaning?; 2.1.2. Why the concern for robustness?; 2.1.3. Plan of the chapter 2.2. Where do "vague approximations" and "zones of ignorance" come from? - the concept of version 2.2.1. Sources of inaccurate determination, uncertainty and imprecision; 2.2.2. DAP formulation: the concept of version; 2.3. Defining some currently used terms; 2.3.1. Procedures, results and methods; 2.3.2. Two types of procedures and methods; 2.3.3. Conclusions relative to a set R of results; 2.4. How to take the robustness concern into consideration; 2.4.1. What must be robust?; 2.4.2. What are the conditions for validating robustness? 2.4.3. How can we define the set of pairs of procedures and versions to take into account? 2.5. Conclusion; 2.6. Bibliography; Chapter 3. The Robustness of Multi-Purpose Machines Workshop Configuration; 3.1. Introduction; 3.2. Problem presentation; 3.2.1. Modeling the workshop; 3.2.1.1. Production resources; 3.2.1.2. Modeling the workshop demand; 3.2.2. Modeling disturbances on the data; 3.2.3. Performance versus robustness: load balance and stability radius; 3.2.3.1. Performance criterion for a configuration; 3.2.3.2. Robustness; 3.3. Performance measurement 3.3.1. Stage one: minimizing the maximum completion time 3.3.2. Computing a production plan minimizing machine workload; 3.3.3. The particular case of uniform machines; 3.4. Robustness evaluation; 3.4.1. Finding the demands for which the production plan is balanced; 3.4.2. Stability radius; 3.4.3. Graphic representation; 3.5. Extension: reconfiguration problem; 3.5.1. Consequence of adding a qualification to the matrix Q; 3.5.2. Theoretical example; 3.5.3. Industrial example; 3.6. Conclusion and perspectives; 3.7. Bibliography; Chapter 4. Sensitivity Analysis for One and m Machines 4.1. Sensitivity analysis

Sommario/riassunto

Scheduling is a broad research area and scheduling problems arise from several application domains (production systems, logistic, computer science, etc.). Solving scheduling problems requires tools of combinatorial optimization, exact or approximated algorithms. Flexibility is at the frontier between predictive deterministic approaches and reactive or "on-line" approaches. The purpose of flexibility is to provide one or more solutions adapted to the context of the application in order to provide the ideal solution. This book focuses on the integration of flexibility and robustness consideration

3. Record Nr.	UNINA9910557742603321
Autore	Pegoretti Alessandro
Titolo	Biodegradable Matrices and Composites
Pubbl/distr/stampa	Frontiers Media SA, 2020
Descrizione fisica	1 online resource (310 p.)
Soggetti	Civil engineering, surveying & building Mechanical engineering & materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	This eBook is a collection of articles from a Frontiers Research Topic. Frontiers Research Topics are very popular trademarks of the Frontiers Journals Series: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most influential researchers, the latest key findings and historical advances in a hot research area! Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers Editorial Office: frontiersin.org/about/contact