

1. Record Nr.	UNINA9910437929103321
Titolo	Robust manufacturing control : proceedings of the CIRP Sponsored Conference RoMaC 2012, Bremen, Germany, 18-20th June 2012 // Katja Windt, editor
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	1-283-93501-5 3-642-30749-3
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (552 p.)
Collana	Lecture notes in production engineering, , 2194-0525
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Disciplina	620.0042 620/.0042 670
Soggetti	Production control Inventory control
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	pt. I. Interdisciplinary approaches for robustness in manufacturing -- pt. II. Robust manufacturing control methods -- pt. III. Robustness in manufacturing networks and adaptable logistics chains -- pt. IV. Process optimization and strategic approaches towards robustness.
Sommario/riassunto	This contributed volume collects research papers, presented at the CIRP Sponsored Conference Robust Manufacturing Control: Innovative and Interdisciplinary Approaches for Global Networks (RoMaC 2012, Jacobs University, Bremen, Germany, June 18th-20th 2012). These research papers present the latest developments and new ideas focusing on robust manufacturing control for global networks. Today, Global Production Networks (i.e. the nexus of interconnected material and information flows through which products and services are manufactured, assembled and distributed) are confronted with and expected to adapt to: sudden and unpredictable large-scale changes of important parameters which are occurring more and more frequently, event propagation in networks with high degree of interconnectivity which leads to unforeseen fluctuations, and non-equilibrium states which increasingly characterize daily business. These multi-scale

changes deeply influence logistic target achievement and call for robust planning and control strategies. Therefore, understanding the cause and effects of multi-scale changes in production networks is of major interest. New methodological approaches from different science disciplines are promising to contribute to a new level comprehension of network processes. Unconventional methods from biology, perturbation ecology or auditory display are gaining increasing importance as they are confronted with similar challenges. Advancements from the classical disciplines such as mathematics, physics and engineering are also becoming of continuing importance.
