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Titolo	From research to operations in weather satellites and numerical weather prediction [[electronic resource]] : crossing the valley of death / / Board on Atmospheric Sciences and Climate, Commission on Geosciences, Environment, and Resources, National Research Council
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ISBN	0-309-17165-2 1-280-18554-6 9786610185542 0-309-56291-0
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Lingua di pubblicazione	Inglese
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Nota di contenuto	""FROM RESEARCH TO OPERATIONS IN WEATHER SATELLITES AND NUMERICAL WEATHER PREDICTION""; ""Copyright""; ""Acknowledgments""; ""Preface""; ""Contents""; ""Executive Summary""; ""BASC FINDINGS""; ""KEY RECOMMENDATIONS RELATING TO EMC""; ""Added Requirements to Serve Future Needs""; ""KEY RECOMMENDATIONS FOR THE ENVIRONMENTAL SATELLITE PROGRAMS""; ""1 Introduction""; ""EXPANSION OF THE FORECASTING FAMILY""; ""2 Transition from Research to Operations in Weather Satellites and Numerical Weather Prediction""; ""IMPROVING THE FORECAST SYSTEM""; ""Transition to Operations"" ""GUIDELINES FOR THE TRANSITION PROCESS""""3 Developing, Enhancing, and Maintaining Numerical Forecast Capability in the U.S.""; ""CURRENT SITUATION AT EMC""; ""EXAMPLES OF TRANSITIONS AT EMC""; ""BASC ASSESSMENT OF THE TRANSITION PROCESS""; ""A Strong Research Program""; ""A Healthy Infrastructure""; ""Strong Interface with the User Community""; ""International Observation and Data Access Partnerships""; ""Continuous Evaluation Process"";

""RECOMMENDATIONS FOR EMC""; ""Improvements Required to Ensure Continuation of Current Capabilities""; ""Added Requirements to Serve Future Needs""
""Management Changes with Little Associated Costs"""; ""4 Environmental Satellites""; ""RESEARCH SCIENTIST INVOLVEMENT IN NPOESS"";
""ACCESSIBILITY OF ENVIRONMENTAL SATELLITE DATA"";
""COORDINATION AMONG OBSERVATIONAL SYSTEMS""; ""BASC ASSESSMENT OF TRANSITION PROCESS""; ""A Strong Research Program""; ""A Healthy Infrastructure""; ""Strong Interface with the User Community""; ""International Observation and Data Access Partnerships""; ""Continuous Evaluation Process"";
""RECOMMENDATIONS FOR THE ENVIRONMENTAL SATELLITE PROGRAMS""; ""5 Concluding Remarks""; ""References"";
""Acronyms and Abbreviations"""; ""Board Members' Biographies"";
""Appendix A""; ""AGENDA FOR THE 1999 BASC SUMMER STUDY"";
""Monday, June 28 OPEN SESSION""; ""Tuesday, June 28 OPEN SESSION"";
""Wednesday, June 30 OPEN SESSION""; ""Thursday, July 1 OPEN SESSION""; ""Friday, July 2 CLOSED SESSION""; ""Appendix B National Weather Service Organization""; ""GENERAL DESCRIPTION""; ""The National Centers for Environmental Prediction""

2. Record Nr.

Titolo

UNINA9910437882103321

Process Machine Interactions : Prediction and Manipulation of Interactions between Manufacturing Processes and Machine Tool Structures / / edited by Berend Denkena, Ferdinand Hollmann

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Altri autori (Persone)

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Disciplina

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Soggetti

Manufactures
Mathematics - Data processing
Multibody systems
Vibration
Mechanics, Applied
Machinery
Engineering mathematics
Engineering - Data processing
Machines, Tools, Processes

Computational Science and Engineering
Multibody Systems and Mechanical Vibrations
Machinery and Machine Elements
Mathematical and Computational Engineering Applications

Lingua di pubblicazione

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Nota di contenuto

From the Contents: Part I Basics -- Measurement and Test Techniques -- Modeling and Simulation -- Adaptive finite elements and mathematical optimization methods -- Part II Grinding -- High-Performance Surface Grinding -- Process-Machine Interaction in Speed-Stroke Grinding -- Part III Cutting -- HPC Stability Simulation -- Development of a Stability Prediction Tool for the Identification of Stable Milling Processes -- Synthesis of Stability Lobe Diagrams -- Part IV Forming -- Advanced Forming Process Model – AFPM.-Consideration of the Machine Influence on Multistage Sheet Metal Forming Processes. -- Part II Grinding -- High-Performance Surface Grinding -- Process-Machine Interaction in Pendulum and Speed-Stroke Grinding -- Part III Cutting -- HPC Stability Simulation -- Development of a Stability Prediction Tool for the Identification of Stable Milling Processes -- Synthesis of Stability Lobe Diagrams -- Part IV Forming -- Advanced Forming Process Model – AFPM.

Sommario/riassunto

This contributed volume collects the scientific results of the DFG Priority Program 1180 Prediction and Manipulation of Interactions between Structure and Process. The research program has been conducted during the years 2005 and 2012, whereas the primary goal was the analysis of the interactions between processes and structures in modern production facilities. This book presents the findings of the 20 interdisciplinary subprojects, focusing on different manufacturing processes such as high performance milling, tool grinding or metal forming. It contains experimental investigations as well as mathematical modeling of production processes and machine interactions. New experimental advancements and novel simulation approaches are also included.