Record Nr. UNINA9910786640903321 **Titolo** Information control problems in manufacturing technology 1992: selected papers from the 7th IFAC/IFIP/IFORS/IMACS/ISPE symposium. Toronto, Ontario, Canada, 25-28 May 1992 / / edited by M. B. Zaremba Oxford, England:,: Published for the International Federation of Pubbl/distr/stampa Automatic Control by Pergamon Press, , 1993 ©1993 **ISBN** 1-4933-0671-5 1-4832-9884-1 [First edition.] Edizione Descrizione fisica 1 online resource (517 p.) IFAC Symposia Series; ; 1993, Number 4 Collana Disciplina 670.285 670/.285 Soggetti Robots, Industrial Automation Flexible manufacturing systems Computer integrated manufacturing systems 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 at the end of each chapters and indexes. Nota di contenuto Front Cover; Information Control Problems in Manufacturing Technology 1992; Copyright Page; Foreword; Table of Contents; PART I: PLENARY PRESENTATIONS; CHAPTER 1. INNOVATION IN PRODUCTS AND PRODUCTION SYSTEMS: THE EUROPEAN COMMUNITY PROGRAMMES ANDEUREKA FAMOS PROJECTS: INTRODUCTION: PRODUCT INNOVATION AS RESULT OF DESIGN AND MANUFACTURING CHANGE: EUROPEAN

ANDEUREKA FAMOS PROJECTS; INTRODUCTION; PRODUCT INNOVATION AS RESULT OF DESIGN AND MANUFACTURING CHANGE; EUROPEAN RESEARCH ANDINNOVATION PROGRAMMES ANDINITIATIVES AS A TOOL OFINDUSTRIAL POLICY; ENABLING TECHNOLOGIES; MANAGEMENT OF NATURAL RESOURCES; MANAGEMENT OF INTELLECTUAL RESOURCES; MODELING EVOLUTION-INNOVATION CYCLES EUROPEAN R&I PROJECTS ANDINITIATIVES RELEVANT TO PRODUCTINNOVATIONCONCLUSIONS; REFERENCES; CHAPTER 2. MODELLING MANUFACTURING ENTERPRISES; INTRODUCTION; CHANGING PARADIGMS; ENTERPRISE MODELLING; DEVELOPEMENT OF MODELLINGTECHNIQUES; DESIGN MANUFACTURINGENTERPRISE;

CONCLUSIONS; REFERENCES; CHAPTER 3. SOME FINDINGS FROM STUDIES IN TECHNOLOGY1ADOPTION; BACKGROUND; SEVEN MAJOR STUDIES; FINDINGS; PART II: SIMULATION OF MANUFACTURING PROCESSES I; CHAPTER 4. A FORMULATION FOR DYNAMICAL DECISIONMAKING IN AN INTEGRATED MANUFACTURING ENVIRONMENT; BACKGROUND AND INTRODUCTION; SYSTEM MODELING AND DYNAMICS

DESIGN OF DECISION-MAKING STRATEGIESCONCLUSIONS; REFERENCES; CHAPTER 5. HIERARCHICAL MODELING APPROACH FOR PRODUCTION PLANNING; INTRODUCTION; METHODOLOGY OF HIERARCHICAL DESIGN; INPUTS TO THE DESIGN PROCESS; DESIGN OF THE PLANNING HIERARCHY; OPERATION OF THE PLANNING HIERARCHY; CONCLUSIONS; REFERENCES; PART III: CONTROL PROBLEMS I; CHAPTER 6. OPTIMAL NEURAL NETWORK CONTROL; INTRODUCTION; OPTIMAL NEURAL NETWORK CONTROL; EXPERIMENTS; CONCLUSIONS AND FUTURE WORK; References; CHAPTER 7. CONTROL OF MANUFACTURING SYSTEMS: AN OBJECT ORIENTED APPROACH; INTRODUCTION; CONTROLLING OBJECTS BY MESSAGES

THE OBJECT MODELA CASE STUDY; CONCLUSIONS AND FURTHER RESEARCH; ACKNOWLEDGEMENTS; REFERENCES; CHAPTER 8. DISCRETE EVENT SYSTEMS CONTROL OF A RAPID THERMAL MULTIPROCESSOR; INTRODUCTION; A NEW PERSPECTIVE; A CONTROL SCHEME; REFERENCES; CHAPTER 9. RTX: A REAL-TIME OPERATING SYSTEM ENVIRONMENT FOR CNC MACHINE TOOL CONTROL; INTCODUCTION; OVERVIEW OF THE CONTROLLER; DESIGN CONSIDERATIONS; RTX: THE OPERATING SYSTEM; CONCLUSIONS; ACKNOWLEDGMENTS; REFERENCES; PART IV: SYSTEM MANAGEMENT I; CHAPTER 10. SCHEDULING OF A FLEXIBLE MANUFACTURING CELL; 1 Introduction; 2 Problem Formulation

3 Solution Methodology4 Numerical Results; 5 Summary; References; CHAPTER 11. DISTRIBUTIVE SCHEDULING OF FLEXIBLE MANUFACTURING SYSTEMS; 1. INTRODUCTION; 2. THE FMS SCHEDULING PROBLEM; 3. DISTRIBUTED SCHEDULING PRINCIPLE; 4. PETRI NETS WITH BUS (PBnets); 5. SIMULATION OF PART SCHEDULING; 6. CONCLUSIONS; REFERENCES; CHAPTER 12. DYNAMIC SCHEDULING BY USING SCHEDULING EDITOR AND DISTRIBUTED DECISION MAKER; Introduction; Two Level Scheduling; Petri-Net Modeling; Strategic Level Scheduling; Operational level Scheduling; Conclusion; References; PART V: AI AND EXPERT SYSTEMS IN MANUFACTURING I CHAPTER 13. INTELLIGENT CONTROLLER FOR FLEXIBLE MANUFACTURING SYSTEM

Sommario/riassunto

These proceedings contain more than 80 of the best papers presented at the INCOM '92 Symposium, and relate to the vast changes which are occurring worldwide in manufacturing technology. Research oriented technical papers cover subjects such as: simulation of manufacturing processes; sensor based robots; information systems; general aspects of CIM and manufacturing networks.