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Nota di contenuto	Preface; Contents; Chapter 1 Overview of Material Processing Automation; 1. Constrained and Non-Constrained Material Processing; 2. Multi-Facet Mechatronic Automation; 3. Sensors for Material Processing; 3.1 Measurands in Material Processing; 3.2 Types of Sensors; 3.3 Microsensors and Soft Sensors; 4. Intelligent Control Techniques; 4.1 Conventional Computer Numerical Control; 4.2 Sensor Based Machine Tool Control; 4.3 Open Architecture and Distributed Control; 4.4 Intelligent Control and Computing Techniques; 4.5 Human-Machine Interface; References Chapter 2 Process Development and Approach for 3D Profile Grinding/Polishing1. Introduction; 2. Profile Grinding and Polishing of Superalloys; 2.1 Superalloy Components and Manual Blending; 2.2 CNC Milling; 2.3 Wheel Grinding; 3. Force Control in Material Removal; 3.1 Robot Holding Tool; 3.2 Robot Holding Workpiece; 4. Model-Based Robotic Machining; 5. Part Variations and Process Dynamics; 6. System Concept of Adaptive Robotic Blending System; 6.1 A Mechatronic

Approach; 6.2 Device and Process; 6.3 Knowledge-Based Process Control (KBPC); 6.4 Data-Driven Supervisory Control (DDSC) 6.5 System Layout and Working Cycle7. Process Optimisation; 7.1 Grinding/Polishing Process Parameters; 7.2 Tool Path Optimisation; 7.3 Tool Wear Compensation; 8. Concluding Remarks; References; Chapter 3 Adaptive Robotic System for 3D Profile Grinding/Polishing; 1. Introduction; 2. Finishing Robot and Control Interface; 2.1 Finishing Robot; 2.2 Self-Aligned End Effector; 2.3 Control Interface; 3. In-Situ Profile Measurement; 3.1 Off-Line versus In-Situ Approach; 3.2 Sensor Techniques; 3.3 Coordinate Transform; 4. Template-Based Optimal Profile Fitting; 4.1 Template Generation 4.2 Profile Fitting Requirements4.3 A Fast Converging Minimisation Algorithm; 4.4 Software Development; 5. Adaptive Robot Path Planner; 5.1 Definition of Tool Path; 5.2 Derivation of End-Effector Orientation; 5.3 Generation of Tool Path; 6. Implementation of SMART 3D Blending System; 7. Results; 7.1 Dimension of Finish Profile; 7.2 Surface Roughness and Finish Quality; 7.3 Wall Thickness; 8. Concluding Remarks; References; Chapter 4 Acoustic Emission Sensing and Signal Processing for Machining Monitoring and Control; 1. Introduction; 2. Sensors in Machining Process Monitoring 2.1 Motor Current & Power2.2 Force/Torque; 2.3 Vibration/Acceleration Signals; 2.4 Optical and Vision System; 3. Acoustic Emission Sensing; 3.1 Acoustic Emission Mechanism; 3.2 Acoustic Emission in Machining; 3.3 Acoustic Emission Sensors; 4. Advanced Signal Processing Techniques; 4.1 Time Domain Analysis; 4.2 Time Series Modelling; 4.3 Frequency Domain Analysis; 4.4 Time-Frequency Domain Analysis; 4.5 Wavelet Analysis; 5. Conclusions; References; Chapter 5 Techniques of Automatic Weld Seam Tracking; 1. Introduction to Weld Seam Tracking; 1.1 The Importance of Welding; 1.2 What is Welding? 1.3 Automated Welding

Sommario/riassunto

This volume presents the editors' research as well as related recent findings on the applications of modern technologies in electrical and electronic engineering to the automation of some of the common manufacturing processes that have traditionally been handled within the mechanical and material engineering disciplines. In particular, the book includes the latest research results achieved through applied research and development projects over the past few years at the Gintic Institute of Manufacturing Technology, Singapore. It discusses advanced automation technologies such as in-process sens

2. Record Nr.	UNISA996395780203316
Autore	Baxter Richard <1615-1691.>
Titolo	Dattodiad y qwestiwn mawr, beth sydd raid i ni ei wneuthur fel y byddom gadwedig [[electronic resource]] : Athrawiaethau i fuchedd sanctaidd. // O waith y disinydd parchedig Mr. Richard Baxter
Pubbl/distr/stampa	Printiedig yn Llundain, : gan Tho. Whitledge a W. Everingham, 1693
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Soggetti	Salvation Catechisms, Welsh Broadside17th century.London (England)
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Note generali	Attributed to Richard Baxter by Wing (2nd ed.). Translation of "The Grand question resolved: what we must do to be saved, instructions for a holy life," attributed to Richard Baxter. "Catechism" -- p. 50-72. Bound and filmed following Wing (2nd ed.) D1788A, Dod, John. Ymadroddion hen Mr. Dod. [London, 1693?] Reproduction of original in: Llyfrgell Genedlaethol Cymru/National Library of Wales, Aberystwyth, Wales.
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