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Nota di contenuto	4th International Conference on Machining, Materials and Mechanical Technologies (IC3MT) -- Preface -- Table of Contents -- Chapter 1: Tools and Machines Design -- A Study on Prototype of End Mill for Ultra-High Pressure Coolant Supplying from Flank Surface Side Using Fluid Simulation -- Fatigue Analysis of Monopile Foundation for Offshore Wind Turbine -- Mechanical Design Using Open-Source Software (Eigenvalue Analysis by Parametric Study) -- Relationship between Flow Field of Cutting Edge and Chip Dispersal during CFRP Drilling -- Chapter 2: Mechatronics -- Development of a Hydrostatic Bearing in High Vacuum Using an Ionic Liquid for a Semiconductor Fabrication Device -- Numerical Investigation of Bearing Characteristics of a Hydrostatic Thrust Bearing with a Flow-Control Restrictor Using a Bending Beam -- Breakage Detection Based on the Breakage Mechanism of Small-Diameter Drills -- Measurement Path Calculation Method for High-Precision On-Machine Measurement -- Swing up Control of the Pendubot with Restricted Actuator Movement Angle Using Energy-Based Methods -- Swing up Control of the Pendubot with Elbow Joint Extended Using Energy-Based Methods -- Verification and Learning of Feature Automatic Recognition with Time

Prediction for EDM and WEDM -- Keyword Index -- Author Index

Sommario/riassunto

This book comprises selected peer-reviewed papers from the 4th International Conference on Machining, Materials, and Mechanical Technologies (IC3MT) held in Taipei, Taiwan in 2022. It serves as a comprehensive compendium of research advancements and innovations in machining technology, materials technology, and mechanical technology. The conference aimed to gather researchers, scholars, engineers, and industry professionals to discuss the latest developments in these fields. The publication highlights topics such as tools and machine design, the use of ultra-high pressure coolant in machining, and the development of mechatronics. It is intended for scholars, practitioners, and industry professionals seeking to enhance their understanding of machining processes and material technologies. The research presented is intended to inspire further innovation and serves as a valuable reference in the field.