

# Table of Contents

## Preface

<b>Dynamic Analysis and Control of Hydraulic Machine System and Industrial Robotic Manipulators</b> Y.L. Hwang, T.N. Ta and C.S. Tran	1
<b>Cyclic Deformation Caused by Repeatedly Contact Loading</b> C.H. Kuo, S.F. Lim and H.R. Ho	8
<b>Identification of Orientation-Specific Damage Using Guided Waves and Diagnostic Imaging</b> C. Zhou, C.L. Zhang, X. Yue and H.Y. Zhu	16
<b>Thermal Displacement Analysis and Verification for Screw in a Vertical Transmission Double Nut Ball-Screw System</b> C.C. Wei, J.C. Wang and Y.L. Huang	22
<b>Dynamic Analysis and Control of Industrial Robotic Manipulators</b> Y.L. Hwang, J.K. Cheng and V.T. Truong	30
<b>The Design and Prototype Manufacture of Helical Gear Reducers with Two Gear Pairs</b> T.H. Chen and L.C. Hsieh	37
<b>Effects of Interlayer on Mechanical Properties of Diamond-Like Carbon Coatings</b> S.H. Yao, Y.L. Su, Y.C. Lai and H.M. Wu	43
<b>Effect of Flow Rate of Reactive Gas on Mechanical and Tribological Properties of Carbon Nitride Coatings</b> Y.L. Su, S.H. Yao, Y.R. Wu and C.Y. Lin	48
<b>The Micro-Temperatures of the Peaks and Valleys of Sliding Rough Surfaces</b> S.Y. Chern, J.H. Horng, C.H. Tsai and H.J. Tsai	53