

10th IMEKO TC10 International Conference on Technical Diagnostics 2005

**Budapest, Hungary
9-10 June 2005**

ISBN: 978-1-63266-394-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2005) by the International Measurement Confederation (IMEKO)
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the International Measurement Confederation (IMEKO)
at the address below.

IMEKO Secretariat
P.O. Box 457
H-1371 Budapest
Hungary

Phone/Fax: +36 1 353 1562

imeko@t-online.hu

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Identification of Relevant Signal Features	1
<i>Wojciech Cholewa</i>	
High Frequency Electromagnetic Field Sensors and Small, Integrated Antennas: Challenges for the Future	5
<i>Guy A. E. Vandenbosch</i>	
Sensor Diagnostics Based on Dynamic Characteristic Curve Estimation	9
<i>Kimmo Latva-Kayra, Risto Ritala</i>	
Sensor Fault Detection in a District Heating Substation	15
<i>Kimmo Yliniemi, Jan van Deventer, Jerker Delsing</i>	
Time Domain Diagnosis of Anticorrosion Coatings Via Shape Designed Measurement Signals	21
<i>Romuald Zielonko, Marek Niedostatkiwicz</i>	
Histogram-based Feature Extraction Technique Applied for Fault Diagnosis of Electronic Circuits	26
<i>Wojciech Toczek, Micha- Kowalewski, Romuald Zielonko</i>	
Application of Rock Solid Attributes for Robust Identification of Glass Breaks Acoustic Signals Via Wavelet Transformation	32
<i>Ireneusz Bemke, Romuald Zielonko</i>	
Technical Monitoring and Diagnostics: Prerequisite of Intelligent, Adaptive Manufacturing Systems	38
<i>Laszlo Monostori</i>	
Similarities of High and Low Levels of Production with Respect to Assignments and Solution Techniques	44
<i>Zsolt Janos Viharos, Zsolt Kemeny</i>	
Appropriate Information Processing for Telemonitoring of Manufacturing Processes	50
<i>Tibor Szalay, Zoltan Repcsenyi, Geza Haidegger</i>	
Symptoms and a Sensor for Permanent Diagnosis of Machines with a Piston-Crank Mechanism	56
<i>Piotr Bielawski</i>	
Electrode Systems and Their Switching Used in Monitoring of Dike Status	61
<i>Ivan Krejci, Jana Parilkova</i>	
Two Non-invasive Methods of Dike Monitoring and Their Results	64
<i>Jana Parilkova, Ivan Krejci, Jaroslav Vesely</i>	
The Influence of Frequency Controlled AC Drives on Vibration and Audible Noise Level on Ships	69
<i>Beata Palczynska, Ludwik Spiralski, Jacek Wyszowski</i>	
The Experimental Method of Reducing Magnetic Field Intensity in Industrial Buildings	72
<i>Beata Palczynska, Ludwik Spiralski, Stanislaw Galla</i>	
Intelligent Metrology, Quality Assurance and Quality Management As Basis for Technical Diagnostics in Global Competitive Production	76
<i>P.H. Osanna, H. Weseslindtner, N.M. Durakbasa, A. Afjehi-Sadat</i>	
Machine Vision and Ultrasonic Supported Measuring and Monitoring Concept for Economical Quality Enhancement in Small Batch Production	82
<i>R. Schmitt, T. Pfeifer, P. Hafner, B. Dietrich</i>	
Bearing Fault Detection for On-line Quality Control of Electric Motors	88
<i>Jiri Vass, Cristina Cristalli</i>	
High-speed Label Inspection System for Textile Industry	93
<i>Istvan Szatmari, Akos Zarandy</i>	
Diagnostics of the Human Circulatory System: High Resolution Beat-to-beat Measurement of Systolic Blood Pressure Using Personalized Models	97
<i>Dieter Barschdorff, Cord Bauch</i>	
Diagnostics of the Human Circulatory System: Application of High Resolution Beat-to-beat Blood Pressure Measurement to Stress and Traffic Situations	103
<i>Dieter Barschdorff, Cord Bauch</i>	
An Informativ Format for Visual Presentation of Results in Gear Diagnostics	109
<i>Gottfried Meltzer, Phong Dien Nguyen</i>	
Detection and Visualization of Flaws in Ultrasonic Defectoscopy	114
<i>Vaclav Matz, Marcel Kreidl, Radislav Smid</i>	
Preventive, Predictive Maintenance by Using Visual Diagnostic Methods	119
<i>Sohair Fakhry</i>	
Diagnostic of Cavitation in Hydraulic Machinery	121
<i>Xavier Escaler, Carme Valero, Eduard Egusquiza</i>	

Monitoring of Dry Sliding Wear Using Fractal Analysis	125
<i>Jianbo Zhang, Paul Regtien, Maarten Korsten</i>	
Full Field Deformation Analysis Applied to Improved CTOD Concept	131
<i>Damir Semenski, Nenad Gubeljak, Drazan Kozak, Petar Curkovic</i>	
Implementation of an Input-output Method of Diagnosis of Analog Electronic Circuits in Embedded Systems	137
<i>Zbigniew Czaja, Dariusz Zaleski</i>	
The Value of Information Obtained Through Transformer Monitoring System.....	143
<i>Mladen Banovic, Zdenko Godec, Vilko Cindric</i>	
Analysis of Voltage and Current Conditions at High Voltage Electric Network, Measuring of Surface Voltage Gradient and Touch Voltage.....	148
<i>Karel Sokansky, Stanislav Misak</i>	
Identification of Diagnostic Statistical State Models for Networked System.....	151
<i>Miika Rajala, Risto Ritala</i>	
Information Summarization for Network Performance Management	157
<i>Mikko Kylvaja, Pekka Kumpulainen, Kimmo Hatonen</i>	
Web Service Runtime Prediction and Operation Fault Diagnosis.....	163
<i>Viktor Oravec, Zoltan Balogh, Ladislav Hluchy, Baltazar Frankovic</i>	
Traceability of Measurements on Optical Fibres and Calibration of Optical Reflectometers in Time Domain	168
<i>Andrea Zanobini, Gaetano Iuculano</i>	
Author Index	