IMEKO TC1 Workshop and Symposium on Virtual and Real Tools for Education in Measurement 2001

Enschede, Netherlands
17 – 19 September 2001

ISBN: 978-1-5108-0393-0

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© (2001) by the International Measurement Confederation (IMEKO)
All rights reserved.

Printed by Curran Associates, Inc. (2015)

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

MULTIMEDIA TOOLS FOR EDUCATION IN MEASUREMENT AND METROLOGY 3
M. Halaj, E. Kurekova, P. Gabko
MEASUREMENT, INSTRUMENTATION & TEST MANAGEMENT MTM, A NEWCOMER TO EDUCATION & TRAINING 15
D. Hofmann
MEASURING AND DIAGNOSTIC SYSTEMS – REAL AND VIRTUAL MEASURES IN BIOMEDICAL EDUCATION 23
K. Jellonek, M. Kotulska
A RULE-BASED EXPERT SYSTEM GUIDE ON UNCERTAINTY FOR METROLOGISTS 27
W. Giardini, K. Dabke
IMPLEMENTATION OF A QUALITY SYSTEM IN THE ACADEMIC ENVIRONMENT AND IN RESEARCH AND DEVELOPMENT LABORATORIES 39
G. Gomes, M. Frota, N. Miekeley, P. Bode
HOW TO EXERCISE COMPLEX MEASUREMENTS 45
J. Holub, R. Smid, J. Vedral
TEACHING CONCEPT IN MEASURING SCIENCE FOR APPLIED PHYSICS BACHELORS 51
V. Sukackas
TEACHING DIGITAL SIGNAL PROCESSING IN A QUALITY ENGINEERING LABORATORY 57
A. Hetman, M. Korczynski
A MECHATRONIC DESIGN PROJECT INTEGRATING MEASUREMENT, SIMULATION AND TRANSDUCER TECHNOLOGY 63
J. Broenink, P. Regtien, T. Lammerink
EVALUATION OF AN OSCILLOSCOPE TRAINING COURSE 67
G. Graaf, D. Wijngaards, R. Wolffenbuttel
MEASUREMENT DATA PROCESSING FOR AUDIO SURROUND COMPENSATION 77
M. Karlsson, W. Kulesza, B. Johansson, A. Rosengren
AN OBJECT SHAPE AND ITS FOURIER SPECTRUM ON IMAGE PROCESSING MEASUREMENT 85
T. Nakanishi, S. Takayama
A NEW APPROACH TO PRACTICAL TRAINING EQUIPMENT FOR MEASUREMENT 89
P. Regtien, K. Commissaris
SIMULATION OF AN ANGULAR VELOCITY SENSOR 95
S. Kausinis, R. Barauskas
VIRTUAL INSTRUMENTS IN THE PROGRAM OF THE ELECTRICAL MEASUREMENTS CHAIR (TUG) 103
L. Referowski, R. Roskosz, D. Swisulski
WWW SYSTEM FOR MODULAR COURSES ON MODERN SENSORS 111
A. Platil, R. Smid
VIRTUAL INSTRUMENTATION – A KEY FOR TEACHING METROLOGY AND QUALITY ENGINEERING 115
M. Korczynski, R. Gozdur
USER NAVIGATION INTERFACE OF VIRTUAL INSTRUMENTS IN ENGINEERING EDUCATION 121
S. Takayama, K. Kariya
VIRTUAL TOOLS FOR EDUCATION 129
O. Aumala
FEMLAB: MATHEMATICAL MODELING AND VIRTUAL PROTOTYPING 131
B. Fluche
Author Index