

JEMNÁ MECHANIKA A OPTIKA

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OBSAH

Optické snímače povrchu přesných strojářských súčiastok (J. Bartl, V. Jacko, M. Hain, D. Smutný).....	139
Objednávka služeb (LASER 2007)	144
Nanofotonické realizace šíření plazmonů (J. Pospíšil, J. Hrdý, J. Hrdý, jr.).....	145
Vláknové lasery v průmyslovém značení (M. Novák).....	149
Nasazení kamer s vysokým rozlišením v meteorologii (J. Zeman, V. Mareš).....	150
Neplánovaná zkouška odolnosti fotovoltaického solárního systému při zatížení větrem (M. Libra, V. Poulek, P. Bican).....	152
Malé světlo s velkým výkonem: LED reflektor s 1 000 lumeny (M. Pávková).....	154
Multisenzorová měřicí technika (Č. Nenáhlo).....	155
Měřicí čočky kolimující rychlou osu (FAC) (red)	156
Berlínská veletržní společnost rozšiřuje portfolio pořádaných veletrhů Laser Optics Berlin 2008, 17. – 19. března 2008 (L. Výborná).....	156
Kongres SPIE Europe „Optics and Optoelectronics“ (P. Tománek).....	157
Osmdesátiny RNDr. Ivana Šolce, CSc. (Z. Melich).....	159
Bezkontaktná optická identifikácia rozmerového opotrebenia rezného nástroja s nadväznou reguláciou počas plynulého priebehu sústruženia (R. Krehel, S. Hloch).....	160
O troch metrologických podujatiach (I. Brezina).....	163
Z technické knihovny (I. Brezina, J. Novák).....	165, 167
Veletrh EMO Hannover 2007 (O. Hampel).....	166
Projekt „Be Your Own Boss“ i v České republice (K. Nevřalová).....	168

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CONTENTS

Surface optical sensors for precise components in engineering industry (J. Bartl, V. Jacko, M. Hain, D. Smutný).....	139
Service order (LASER 2007)	144
Nanophotonical realizations of propagation of the plasmons (J. Pospíšil, J. Hrdý, J. Hrdý, jr.).....	145
Fibre lasers for industrial marking (M. Novák).....	149
Employment of high definition cameras in meteorology (J. Zeman, V. Mareš).....	150
Unscheduled wind resistance test of photovoltaic solar system (M. Libra, V. Poulek, P. Bican).....	152
Tiny light with huge power: 1000 lumens LED reflector (M. Pávková).....	154
Multisensor measuring technology (Č. Nenáhlo).....	155
Measuring fast axes collimating (FAC) lenses (edit.).....	156
Berlin fair society enlarging portfolio of trade-fairs - Laser Optics Berlin 2008, 17 – 19 March 2008 (L. Výborná).....	156
Congress SPIE Europe „Optics and Optoelectronics“ (P. Tománek).....	157
RNDr. Ivan Šolc, CSc.'s eightieth birthday (Z. Melich).....	159
Optical sensors in the control process of wedge abrading during the turning realizing the correction (R. Krehel, S. Hloch).....	160
About three metrological events (I. Brezina).....	163
From technical library (I. Brezina, J. Novák).....	165, 167
Trade fair EMO Hannover 2007 (O. Hampel).....	166
Project “Be Your Own Boss” also in the Czech Republic (K. Nevřalová).....	168

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CONTENTS

- Surface optical sensors for precise components in engineering industry** (J. Bartl, V. Jacko, M. Hain, D. Smutný)..... 139
The present development of measuring technique in engineering industry emphasizes an inspection of components, particularly their precise geometrical shapes, a mutual orientation of their surfaces and axes and in addition it requires to meet these measuring demands right within the production process. Such an active production quality management is taking place together with a working machine control. This article deals with special sensors developed in the authors' workplace that are specified for a rapid surface quality control of precise engineering components. The firm Mesing installs these sensors into measuring devices used in the Czech and Slovak automobile or bearing industries.
Keywords: contactless technology, scattering method, autofocus method, active control
- Service order (LASER 2007)**..... 144
- Nanophotonical realizations of propagation of the plasmons** (J. Pospíšil, J. Hrdý, J. Hrdý, jr.)..... 145
The article contains nanophotonical problems of realization of propagation of the plasmons formed by an excitation optical radiation in simple plasmonic waveguides created by a metallic nanostripe, metallic or semiconducting nanowire, metallic nanoparticle or linear chain of more metallic nanoparticles, coupled electromagnetically. It is directed especially to description of contemporary basic experimental arrangements for observing and measuring the energetic transport of plasmons together with introduction of some typical graphic dependences for a metallic nanoparticle Au, couple of such nanoparticles and for a linear chain of more identical nanoparticles Ag.
- Fibre lasers for industrial marking** (M. Novák) 149
- Employment of high definition cameras in meteorology** (J. Zeman, V. Mareš)..... 150
Landscape high resolution pictures taken regularly in several minute intervals present from both meteorological and biological point of view a valuable sequential information of local conditions, the use of which is only started to look for. This article is concerned with a photobox description, the device used in measuring stations of Hydronet.cz project, its output data are spread on-line via internet.
- Unscheduled wind resistance test of photovoltaic solar system** (M. Libra, V. Poulek, P. Bican)..... 152
- Tiny light with huge power: 1000 lumens LED reflector** (M. Pávková)..... 154
- Multisensor measuring technology** (Č. Nenáhlo)..... 155
- Measuring fast axes collimating (FAC) lenses** (edit.) 156
- Berlin fair society enlarging portfolio of trade-fairs - Laser Optics Berlin 2008, 17 – 19 March 2008** (L. Výborná)..... 156
- Congress SPIE Europe „Optics and Optoelectronics“** (P. Tománek) 157
Prague Congress Centre hosted more than 400 scientists from 24 countries, which have taken part in SPIE Europe International Congress on Optics and Optoelectronics (16-19 April 2007). They answered to the invitation, and the most important optical event ever organised in the Czech Republic has been born. The excellent and exciting plenary talks on Hot topics in Optics were followed by successful nine conferences on Metamaterials, Nonlinear optics and Applications, Photon Counting applications, Quantum optics and Applications, Adaptive optics for Laser Systems and Other Applications, Optical Sensors, Damage to VUV, EUV and X-Ray Optics and Photonic Crystal Fibers. The importance of the Congress was enhanced by the lecture of Prof. Theodor Hänsch, Nobel Prize Winner 2005.
- RNDr. Ivan Šolc, CSc.'s eightieth birthday** (Z. Melich)..... 159
- Optical sensors in the control process of wedge abrading during the turning realizing the correction** (R. Kreheř, S. Hloch)..... 160
This paper describes the development of a new concept of cutting tools using optical sensors for the measurement of tooled surface extent in the turning operations. After examinational measurements optical sensor was selected and its analysis is dedicated the another part of this work. The basic idea of indirect measurement of cutting tool abrasion is scanning the distance of a component during the cutting.
- About three metrological events** (I. Brezina)..... 163
- From technical library** (I. Brezina, J. Novák) 165, 167
- Trade fair EMO Hannover 2007** (O. Hampl) 166
- Project “Be Your Own Boss” also in the Czech Republic** (K. Nevřalová)..... 168