

# **21st IMEKO TC2 Symposium on Photonics in Measurement 2013**

**Gdansk, Poland  
16-18 September 2013**

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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](mailto:imeko@t-online.hu)

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# Daily program

**Monday, 16.09.2013**

Registration of participants  
Coffee break (9:00 - 10:00)

Opening Ceremony (10:00-10:20)

## **Session I „Optical Positioning" (10:20-12:00)**

10:20 - 10:40 M. S. Warden, B. Hughes "Novel method for simultaneous coordinate measurement of multiple targets with high accuracy" ~~ÁP~~

10:40 - 11:00 A. Albertazzi, A. Vieira Fantin "Fault detection in shearography images using the phase divergent" ~~ÁP~~

11:00 -11:20 E. V. Kuvaldin, A. G. Ershov "Method of threshold energy measurements" ~~ÁP~~

11:20 -11:40 M. Baumgart, A. Tortschanoff "Theoretical aspects on optical angular position sensing with optimized signal linearity for tiltable mirrors" ~~ÁP~~

11:40 -12:00 T. Pinto, A. Albertazzi "Off-axis multi-line laser triangulation sensor for robotized positioning and orientation" ~~ÁP~~

Lunch (12:00-13:00)

Gdańsk University of Technology Sightseeing (13:00 - 14:30)

Coffee break (14:30-15:00)

## Session II „Interferometry" (15:00-16:20)

15:00 - 15:20 A.-F. Obaton, M. Wang, D. Duday, N. Boscher, J. P. Wallerand, H. Nouria, J.-A. Salgado "Interferometric techniques to interrogate guidedwave-based sensors for metrology" ~~ÁPDE~~

15:20 - 15:40 M. Kraszewski, M. Strąkowski "Wavelength dependent Monte Carlo algorithm for OCT signal simulations" ~~ÁPDE~~

15:40 - 16:00 H. Jin, S. Jin, K. Yuan "Illuminance Analysis of YAG-Phosphor LED Road Lighting under Mesopic Vision Lighting Conditions" ~~ÁPDE~~

16:00 - 16:20 S. Hauser "Wideband light sources in applications for HR-OCT and confocal microscopy" ~~ÁPDE~~

16:20 - 16:40 A. Tortschanoff, M. Baumgart, D. Holzmann, M. Lenzhofer, Ch. Mayer, T. Sandner "MEMS-mirror tilt-detection based on a quadrant diode scheme" ~~ÁFI~~

Coffee break (16:40-17:00)

## Session III „Fluorescence" (17:00-18:00)

17:00-17:20 P. Brueckner, A. Schlegel, S. Holder, S. Lerm, P. Werner, R. Fuettere "High Resolution Acquisition and Processing of Fluorescent Microscopic Images for Quality Assurance of Food" ~~ÁFJ~~

17:20-17:40 G. Gerstorfer, B. G. Zagar "Theory and Simulation of Fluorescence in a Polymer Melt Strand" ~~ÁGI~~

17:40-18:00 R. Viskup, T. Stanger, L. del Re, T. Reinisch, A. Bergmann "Measurement of transient soot emissions by means of full stream, in-situ laser induced incandescence" ~~ÁIF~~

Symposium dinner in "Browarnia" - Old Town in Gdańsk (19:00)

**Tuesday, 17.09.2013**

**Session IV „Spectroscopy and X-Ray techniques" (9:10-10:10)**

9:10-9:30 S. Carmignato "Uncertainty of X-ray computed tomography dimensional measurements" ~~Á~~ ~~P~~ ~~DE~~

9:30-9:50 M. Gnyba, P. Antoniuk, M. Sobaszek „Raman investigation of CVD diamond films deposited on titanium:aluminium alloys" ~~Á~~ ~~P~~ ~~DE~~

9:50 - 10:10 T. Myllylä, V. Korhonen, Ł. Surazyński, A. Zienkiewicz, H. Sorvoja, R. Myllylä "Lock-in amplification - a practical technique when utilizing high-power LEDs in near-infrared spectroscopy" ~~Á~~ ~~H~~ ~~I~~

Coffee break (10:10-10:40)

**Session V (10:40-12:00) „Biophotonics and photonic components"**

10:40 - 11:00 M. Jędrzejewska-Szczerska, A. Popov, M.S. Wróbel, A. Bykov "Multi- layered tissue phantoms for noninvasive optical diagnostics" ~~Á~~ ~~A~~ ~~G~~

11:00 - 11:20 I. G. Palchikova, L. V. Omelyanchuk, E. S. Smirnov "Diffractive inaccuracy in novel dna image cytometry" ~~Á~~ ~~A~~ ~~I~~

11:20 -11:40 A. Krysiński, M. Śmietana, W. J. Bock, P. Mikulic "Long-period gratings with high-refractive-index nano-overlay: comparison of experimental results and numerical simulations" ~~Á~~ ~~P~~ ~~DE~~

11:40 - 12:00 Z. Zhao, P. Moilanen, P. Karppinen, A. Salmi, E. Hóggström, J. Timonen, R. Myllylä "Interferometric detection of ultrasonic flexural guided wave in coated bone phantoms" ~~Á~~ ~~A~~ ~~H~~

Lunch (12:00-13:00)

## Session VI (13:00-14:40) "Photonics Metrology"

13:00-13:20 V.Ye. Kravtsov, V.N. Krutikov, S.V. Tikhomirov "Measurements unity providing for fibre-optical transmission systems" ~~ÁPDE~~

13:20-13:40 M. Petz, M. Fischer, R. Tutsch "Systematic errors in deflectometry induced by use of liquid crystal displays as reference" structure" ~~ÁÁ€~~

13:40-14:00 M. Michihata, P.D.Tran, T. Hayashi, Y. Takaya "Fundamental investigation for stochastic metrology with multi-sensors for micro-system technology: in case of optical pathlength" ~~ÁÁÎ~~

14:00-14:20 L. F. Lages Martins, J. M. Rebordão, A. Silva Ribeiro "Intrinsic parameterization of optical system applied to dynamic displacement monitoring of long-span suspension bridges" ~~ÁPDE~~

14:20-14:40 R. Schmitt, J. Riedel "Scanning measurement of aspheres" ~~ÁÁG~~

Coffee break (14:40-16:00)

Meeting of IMEKO TC2 Committee (15:00-16:00)

Beautiful Old Gdańsk Sightseeing (starts at 16:00 )

## Wednesday, 18.09.2013

### Special Session (9:10 - 11:10) "Diamonds and Photonics"

9:10 - 9:30 E. Bourgeois "Gap state spectroscopy of NV centers in diamond"  
(invited lecture) ~~ÁPDE~~

9:30 - 9:50 M. Kowalska, , K. Fabisiak, K. Paprocki, A. Wrzyszczyński, M. Szybowicz, "The reaction kinetics studies of diamond electrodes of different quality and at different levels of sp<sup>2</sup> -hybridized carbon phase concentration"  
(invited lecture) ~~ÁPDE~~

9:50 - 10:10 K. Paprocki, K. Fabisiak, M. Szybowicz, A. Banaszak "X-ray diffraction studies on grain size of polycrystalline diamond and residual stress on silicon substrate prepared by HF CVD" ~~ÁPDE~~

10:10-10:30 M. Bockrath "Electronic Phenomena in these nanostructured carbon materials" (invited lecture) ~~ÁPDE~~

10:30-10:50 M. Śmietana "DLC-coated optical fiber sensors" (invited lecture) ~~ÁPDE~~

10:50 - 11:10 R. Bogdanowicz "Optical properties of boron-doped diamond films" ~~ÁPDE~~

Coffee break (11:10-11:40)

### Poster Session

1. I. Kierk "Graphene-diamond hybrid heterostructures for biosensing applications" (invited presentation) ~~ÁPDE~~
2. W.Rzodkiewicz, M. Latek, A. Krysiński "Determination of stress distributions in dielectric layers under the gate electrodes of MOS structure by Raman spectroscopy" ~~ÁPDE~~
3. G. M. Grigorian, A. Cenian "The spatial distribution of the excited species in discharge plasmas in mixtures of He with molecular gases" (invited presentation) ~~ÁPDE~~

Visits at the Faculty of ETI Laboratories (11:40-13:00)

Lunch 13:00-14:00

Closing ceremony 14:00 - 14:20