

Contents

| | |
|-----|----------------------|
| vii | Authors |
| ix | Conference Committee |

SESSION 1 DIGITAL HOLOGRAPHY

| | |
|---------|---|
| 9890 02 | Digital holographic microscopy for the characterization of microelectromechanical systems (Invited Paper) [9890-1] |
| 9890 03 | Photon counting digital holography [9890-2] |
| 9890 04 | Partial spatial coherence illumination in digital holographic microscopy: quantitative analysis of the resulting noise reduction [9890-3] |
| 9890 05 | Perspectives of multimode fibers and digital holography for optogenetics [9890-4] |
| 9890 06 | Digital holography with electron wave: measuring into the nanoworld (Invited Paper) [9890-5] |
| 9890 07 | Measurement of hygroscopic strain in deodar wood during convective drying using lensless Fourier transform digital holography [9890-6] |

SESSION 2 3D METROLOGY

| | |
|---------|--|
| 9890 08 | Structured light optical microscopy for three-dimensional reconstruction of technical surfaces [9890-7] |
| 9890 09 | Triangulation-based 3D surveying borescope [9890-8] |
| 9890 0A | High-contrast 3D image acquisition using HiLo microscopy with an electrically tunable lens [9890-9] |
| 9890 0B | Three-dimensional measurements with a novel technique combination of confocal and focus variation with a simultaneous scan [9890-10] |

SESSION 3 OPTICAL TOMOGRAPHY

| | |
|---------|---|
| 9890 0C | Array-type miniature interferometer as the core optical microsystem of an optical coherence tomography device for tissue inspection (Invited Paper) [9890-11] |
| 9890 0D | Vertical comb-drive microscanner with 4x4 array of micromirrors for phase-shifting Mirau microinterferometry [9890-12] |
| 9890 0E | High-resolution full-field optical coherence tomography using high dynamic range image processing [9890-14] |

- 9890 OF **Space-domain, filtered backpropagation algorithm for tomographic configuration with scanning of illumination** [9890-15]

SESSION 4 NANOSCALE METROLOGY, NANOIMAGING, AND NEAR-FIELD MICROSCOPY

- 9890 OG **Overview of label-free far field optical nanoscopy techniques for nanometrology** [9890-16]
- 9890 OI **A silicon superlens with a simple design working at visible wavelengths** [9890-18]
- 9890 OJ **High-resolution photocurrent mapping of thin-film solar cells using scanning near-field optical microscopy** [9890-19]
- 9890 OK **Optical properties of spray coated layers with carbon nanotubes and graphene nanoplatelets** [9890-20]

SESSION 5 SCATTEROMETRY

- 9890 OL **Wavefront shaping for flow-field measurements through varying phase boundaries** [9890-21]
- 9890 OM **Robust determination of asymmetric side wall angles by means of coherent scanning Fourier scatterometry** [9890-22]
- 9890 ON **Structure and mesoscopic characterization of laser ablated carbon nanoparticles in water by Raman scattering** [9890-23]
- 9890 OO **Speckle decorrelation study of phase heterogeneous liquid medium** [9890-24]
- 9890 OP **Inverse scattering spectroscopic method for the fast measurement of the number and mass concentrations of metal nanoparticle colloid** [9890-25]

SESSION 6 TOPOGRAPHY AND SURFACE MEASUREMENTS

- 9890 OQ **Local reflectance spectra measurements of surfaces using coherence scanning interferometry** [9890-27]
- 9890 OR **Two-dimensional low-coherence interferometry for the characterization of nanometer wafer topographies** [9890-28]
- 9890 OS **Sensing roughness and polish direction** [9890-29]

SESSION 7 SPECIALIZED TECHNIQUES

- 9890 OT **Production of arbitrary polarized light beams with a liquid crystal spatial modulator (Invited Paper)** [9890-30]

- 9890 0V **Evaluation of single-shot and two-shot fringe pattern phase demodulation algorithms aided by the Hilbert-Huang transform [9890-32]**
- 9890 0W **Effective generation of unidirectional SPP beam with arbitrary profile [9890-33]**

SESSION 8 INTERFEROMETRY APPLICATIONS

- 9890 0X **Influences of edges and steep slopes in 3D interference and confocal microscopy [9890-34]**

POSTER SESSION

- 9890 11 **Vertical integration of array-type miniature interferometers at wafer level by using multistack anodic bonding [9890-13]**
- 9890 12 **Measurement of defects by measuring of light scattering from surfaces using focused illumination [9890-38]**
- 9890 13 **Precision topographic inspection of MOEMS by moiré interferometry [9890-39]**
- 9890 14 **Optical characterization of SiO₂ thin films using universal dispersion model over wide spectral range [9890-40]**
- 9890 15 **3D through silicon via profile metrology based on spectroscopic reflectometry for SOI applications [9890-41]**
- 9890 16 **Application of laser radiation for investigation of oriented polypropylene membranes [9890-42]**
- 9890 18 **Subaperture method for aspheric surface metrology using curvature data [9890-44]**
- 9890 1A **Aberration retrieval for the characterization of micro-optical components [9890-46]**
- 9890 1B **Capillary-scale interferometry at high angles of scattering for refractive index measurements of small volumes [9890-47]**
- 9890 1D **Optical properties of polymer microtips investigated with workshop tomographic system [9890-49]**