International Workshop on Holographic Memory and Display 2010

Program (tentative)

Monday, 15 Nov.

9:45 Opening Remarks

10:00 - 11:30 Session A

- Susanna Orlic (invited)
  Tech. Univ. Berlin (Germany)
  “Key Challenges and Opportunities in Microholographic Disk Technology”
- Hideharu Mikami, Kentaro Osawa, and Koichi Watanabe (invited)
  Hitachi (Japan)
  “Optical Phase Multi-level Recording in Microhologram”
- Timo Feid, Enrico Dietz, Johannes Gentz, Alan Guenther, Susanna Orlic
  Tech. Univ. Berlin (Germany)
  “Microholographic Gratings as Guiding Structure for Automatic Tracking and Focusing”
- Do-Hyung Kim, Cheol-Ki Min, Janghyun Cho, Nakyeyong Kim, Kyoung-Su Park, No-Cheol Park, Hyunseok Yang and Young-Pil Park
  Yonsei Univ. (Korea)
  “Effect of dynamic range consumption for microholographic data storage system”

11:30 - 13:00 Lunch

13:00 - 14:30 Session B

- Takashi Fukuda, Emi Uchida, Kazuyoshi Masaki, Toshio Ando, Takehiro Shimizu, Daisuke Barada,, and Toyohiko Yatagai (invited)
  AIST (Japan), Nippon Steel Chemical (Japan), Utsunomiya Univ. (Japan)
  “Polarization-sensitive recording medium based on axis-selective photoreaction mechanism”
- Horst Berneth, Friedrich-Karl Bruder, Thomas Faecke, Rainer Hagen, Dennis Hoenel, David Jurbergs, Thomas Rölle, Günther Walze, and Marc Stephan Weiser
  Bayer MaterialScience (Germany), Bayer Taiwan (Taiwan)
  “Bayfol® HX: A Versatile Holographic Material for Display Applications”
- Jang Hyun Kim, Nakyeyong Kim, Hyunseok Yang, Jin bae Park
  Yonsei Univ. (Korea)
  “Hybrid Intelligence Algorithm for error correction and Four Pixels Method using Small Size Spot in Holographic Data Storage System”

14:30 - 15:00 Coffee Break

15:00 - 16:30 Session C

- SeungHyun Lee and HoonJong Kang (invited)
  Kwangwoon Univ. (Korea), Bilkent Univ. (Turkey)
  “Digital Hologram Generation of a Real 3D Object Using a Depth Camera”
Takanori Nomura (invited)
Wakayama Univ. (Japan)
“Random phase-encoding phase-shifting digital holography”

Kazuhiro Yamaguchi, and Yuji Sakamoto
Hokkaido Univ. (Japan)
“Calculation Method Considering Reflectance Distributions for CGH by using Various Sizes of Microfacets”

Yukako Takizawa, Yoichi Kitagawa, Tetsuya Matsumoto, Akio Mizuno, Takaharu Sato, and Osamu Matoba
Hyogo Prefectural Inst. of Tech. (Japan), Kyowa Electronics (Japan), Kobe Univ. (Japan)
“Volume Holographic Imaging Element in Eye-Gaze Detection Device”

16:30 - 18:00 Poster Session

Tatsuki Tahara, Yasuhiro Awatsuji, Kenzo Nishio, Shogo Ura, Toshihiro Kubota, and Osamu Matoba
Kyoto Inst. of Tech. (Japan), Kubota Holography Lab. (Japan), Kobe Univ. (Japan)
“Quantitative evaluation of the field of view and the viewing zone of single-shot phase-shifting digital holography”

Masanori Takahayashi, Atsushi Okamoto and Akihisa Tomita
Hokkaido Univ. (Japan)
“Experiment on Photorefractive Collinear Holographic Data Storage by Semicircular Phase-Shift Methods”

Tomohiro Ohori, Takefumi Yamada, Shuhei Yoshida, Manabu Yamamoto
Tokyo Univ. of Sci. (Japan)
“Simulation Analysis of Reflection Type Holographic Recording and Study about Influence of Media Shrinkage”

Hiroaki Yamashita, Koki Wakunami, Masahiro Yamaguchi, and Nagaaki Ohyama
Tokyo Inst. of Tech., (Japan)
“Occlusion processing for Computer Generated Hologram by using light-ray sampling plane”

Yih-Shyang Cheng, Chih-Hung Chen, and Yi-Chen Hsieh
National Central Univ. (Taiwan)
“Design of Diffraction Gratings for Color Reflection Disk-type Multiplex Hologram”

Tsubasa Ichikawa and Yuji Sakamoto
Hokkaido Univ.
“Calculation Method for Reflectance Distribution of Various Material in Computer Generated Hologram with FDTD method”

Chih-Yuan Cheng, Yeh-Wei Yu and Ching-Cherng Sun
National Central Univ. (Taiwan)
“The Experiment of the Collinear Holographic Data Storage System”

Akihiro Takita and Yoshio Hayasaki
Center for Optical Research and Education, Utsunomiya Univ. (Japan)
“Estimation of Refractive Index of Laser Induced Phenomena by Comparing of Experimental and Computational Results”

Chi Shou Wu, Yeh Wei Yu, Shon-Fu Chen, and Ching-Cherng Sun
National Central Univ. (Taiwan), Chung Yuan Univ. (Taiwan)
“The Comparison of Bragg Selectivity for the Reflection Type of Volume Phase Hologram in Lithium Niobate using the VOHIL Model and Coupled Wave Theory”
Hidenobu Arimoto, Wataru Watanabe, Kazuyoshi Masaki, and Takashi Fukuda
AIST (Japan), Nippon Steel Chemical (Japan)
"Quantitative Phase Measurement of Light-induced Refractive Index Change in Photopolymer with Digital Holographic Microscopy"

Jiwoon Yeom, Jisoo Hong, Jae-Hyeung Park and Byoungho Lee
Seoul National Univ. (Korea), Chungbuk National Univ. (Korea)
"Phase-only hologram for multi-plane images based on integral imaging"

Pramod Kumar, Joby Joseph, and Kehar Singh
Indian Inst. of Tech. (India)
"Optical Interference Based Encryption Method for Gray-Scale Images, Using a Single SLM"

Kunihiro Takano, Tomoyuki Seino, Syunsuke Nagao, Shigeyuki Komuro, Koki Sato, and Kikuo Asai
Tokyo Metropolitan College of Industrial Tech (Japan), Shonan Inst. of Tech. (Japan), The Open Univ. of Japan (Japan)
"Characteristics of Reconstructed Holographic Images of the Produced by Multiple Recovering Points Using Time-Shared Displaying Technique (II)"

Cho-Lok Han, Nakyeong Kim, Do-Hyung Kim, Janghyun Kim, Kyoung-Su Park, No-Cheol Park, Hyunseok Yang, Young-Pil Park
Yonsei Univ. (Korea)
"Active Compensation Method of Exposure Time for Holographic Data Storage System"

Toshio Ando, Takehiro Shimizu, Kazuyoshi Masaki, Daisuke Barada, Emi Uchida, and Takashi Fukuda
Nippon Steel Chemical (Japan), Utsunomiya Univ. (Japan), AIST(Japan)
"Holographic Single and Multiplexing Characteristics of Polarization Sensitive Recording Media for Vector Wave Memories"

Atsushi Okamoto, Masanori Takabayashi, Keisuke Kunori
Hokkaido Univ. (Japan)
"Spatial Quadrature Amplitude Modulation Method by Dual-Stage Holographic Memory"

Jae-sung Lee, Sang-woo Ha, Jeong-kyo Seo, Jung-joon Lee and Byung-Hoon Min
LG Electronics (Korea)
"Pixel-size optimization for maximum data capacity in Holographic data storage"

Pramod Kumar, Joby Joseph, and Kehar Singh
Indian Inst. of Tech. Delhi, (India)
"Impulse Attack-Free Holographic Encryption Systems Based on Double-Random-Phase Encryption Scheme"

Yohsuke Kawagoe, Daisuke Barada, Hiroki Sekiguchi, Takashi Fukuda and Toyohiko Yatagai
Utsunomiya Univ. (Japan), AIST (Japan)
"Multilevel optical recording in retardography"

Tomohiro Kiire, Hirokazu Miyazawa, and Toyohiko Yatagai
Utsunomiya Univ. (Japan)
"Phase Amplification in Doppler Phase-Shifting Digital Holography"

Yo Kondo, Yosuke Takahata, Yasuyuki Yamagishi, Manabu Yamamoto
Tokyo Univ. of Science, (Japan)
"Two dimensional signal processing for holographic data storage"
18:00 - 20:00  Bunquet
Tuesday 16 Nov.

9:30 - 11:30  Session D

●  Kevin Curtis (invited)
   Technologies (USA)
   “Formatting Holographic Media”

●  Hideyoshi Horimai (invited)
   Toyohashi Inst. Tech. (Japan)
   “High-Density Holographic Recording with Monocular Architecture”

●  Taku Hoshizawa, Ken-ichi Shimada, Toshiki Ishii, Makoto Hosaka, and Kevin Curtis
   Hitachi (Japan) InPhase Technologies (USA)
   “High-Density Holographic Recording with Monocular Architecture”

●  Ryosuke Hiramatsu, Kouichi Nitta, and Osamu Matoba
   Kobe Univ. (Japan)
   “Effect of Confocal Scheme in Macroscopic Shrinkage Model of Photopolymer in
   Speckle-Shift-Multiplexed Reflection-type Holographic Memory System”

●  Gilles Pauliat and Kevin Contreras
   l’Institut d’Optique (France)
   “Recording high-resolution wavelength-multiplexed data pages in a Lippmann
data storage system”

●  Yeh-Wei Yu and Ching-Cherng Sun
   National Central University (Taiwan)
   “Improving the signal-to-noise ratio of a collinear holographic storage system by a
ring lens array phase mask”

11:30 - 13:00  Lunch

13:00 - 14:30  Session E

●  Lluís Martínez-León, María A. Araiza, Bahram Javidi, Pedro Andrés, Jesús Lancis, and Enrique Tajahuerce (invited)
   Univ. Jaume (Spain), Univ. Autónoma de Zacatecas (México), Univ. Connecticut (USA), Univ. de València (Spain)
   “Parallel Color Digital Holography by Using the Fractional Talbot Effect”

●  Myung K. Kim (invited)
   Univ. of South Florida (USA)
   “Numerical Techniques of Digital Holography for Microscopy and Metrology”

●  Yongjun Lim, Chi-Young Hwang, and Byongho Lee
   Seoul National Univ. (Korea)
   “Digital holographic microscopy for concurrent activation of reflection- and transmission-mode”

●  Tomoyoshi Shimobaba, Taro Toyota, Nobuyuki Masuda, and Tomoyoshi Ito
   Chiba Univ. (Japan), Univ. of Tokyo (Japan)
   “Portable and low-cost digital holographic microscopy”

14:30 - 15:00  Coffee Break

15:00 - 16:30  Session F

●  Setsuko Ishii (invited)
   Tokyo Inst. of Tech.
“Installation with sunlight and holoography - As environmental art”

● Gerald Fütterer, Stephan Reichelt, Norbert Leister, Ralf Häussler (invited)
  SeeReal Technologies GmbH (Germany)
  “Compact Holographic Display Product Solutions” (invited)

● Yuji Sakamoto Yasuhiro Honda, and Noriyuki Hayashi
  Hokkaido Univ. (Japan)
  “Capturing Hologram Data under Natural Light by Using MVI”

16:30 - 17:00  Closing