

USE2004

English session

The 25 th Symposium on ULTRASONIC ELECTRONICS Program

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Oct.28, 2004

Short oral presentation for posters (9:35 ~ 10:20)

Chairman Ken Yamada (Tohoku Univ.)

P2-31 Conversion of 45°rotated X-Cut KNbO₃ Plates to Y-Cut Plates by Compression Kiyoshi Nakamura , Norihiro Chiba , Shigeo Ito (Tohoku Univ.)

P2-32 Exploration of piezoresponse and applicability based on Nb-doped lead zirconate titanate ceramic Bing-Huei Chen (Nan Jeon Institute of Technology) , Cheng-Liang Huang (National Cheng Kung Uni v.), Long Wu (Ftech Corp.)

P2-33 Evaluation of Piezoelectric and SAW characteristics of GdCOB crystal Takashi Nishida , Tadashi Shiosaki (Nara Inst. of Sci. and Tech.)

P2-34 Photoacoustic and Photoluminescence Characterization of Mn-Doped ZnS Nanoparticle:Study of UV Irradiation Effect Almira B. Cruz, Quin Shen, Taro Toyoda (Electro-Communications Univ.)

P2-35 Effect of adhesion force between crack planes in analytical solution of nonlinear contact vibration Yoshikazu Ohara, Tsuyoshi Mihara, Kazushi Yamanaka (Tohoku Univ.)

P2-36 Crack Detection in Materials Using the Randomized Hough Transform in Ultrasonic Imagery Thouraya Merazi Meksen, Malika Boudraa (Univ. des Sci. et Tech. Houari Boumediene), Redouane Drai (Centre de Recherche en Soudage et Controle)

P2-37 Surface wave EMAT with mutual correlation method Katsuhiro Kawashima (Tokyo Univ. of Tech.)

P2-38 A Nanometer Order Resolution Displacement Measurement System Using an Air-Coupled Ultrasonic Wave Katsuhiro Sasaki , Morimasa Nishihiira , Kazuhiko Imano (Akita Univ.)

P2-39 Quantitative evaluation of surface roughness by air coupled ultrasounds Deden Dian Sukmana, Ikuo Ihara (Nagaoka Univ. of Tech.)

P2-40 Effect of a waveguide in the ultrasonic phase conjugate imaging system Masahiro Ohno , Takahiro Kato (Chiba Inst. of Tech.) , Akira Kokubo (Univ. of Tokyo) , Ken Yamamoto (Kobayashi Inst. of Physical Research)

P2-41 Study on the handlings of FDTD method to analyze sound fields

Yoshiki Nagatani , Masahide Murakami , Yasuto Hara , Yoshiaki Watanabe (Doshisha Univ.)

P2-42 Imaging of picosecond longitudinal acoustic pulses in a transparent medium Motonobu Tomoda (Hokkaido Univ.) , Roberto Li Voti (Roma Univ.) , Osamu Matsuda , Oliver B. Wright (Hokkaido Univ.)

P2-43 Elastic and magnetic anisotropy in Co/Pt superlattices: Measurement by RUS/Laser method Nobutomo Nakamura , Hirotsugu Ogi , Masahiko Hirao (Osaka Univ.) , Teruo Ono (Kyoto Univ.)

P2-44 B/A Measurement for Liquid Samples Using an LN Transducer with Inverted-Domain Layer Shigemi Saito , Akira Yamamoto (Tokai Univ.) , Kiyoshi Nakamura (Tohoku Univ.)

P2-45 Terahertz ultrasonic generation and detection in GaAs/AlGaAs quantum wells Takehiro Tachizaki , Osamu Matsuda , Takashi Fukui (Hokkaido Univ.) , Jeremy J. Baumberg (Southampton Univ.) , Oliver B. Wright (Hokkaido Univ.)

P2-46 Real time imaging of surface acoustic waves on a sphere Hiroto Yamazaki , Osamu Matsuda , Oliver B. Wright (Hokkaido Univ.)

P2-47 Basic study on the evaluation of the quality of rice grains by the use of photoacoustic imaging Manabu Suzuki (Tohoku Gakuin Univ.) , Katsuhiko Miyamoto (Tohoku Univ.) , Tsutomu Hoshimiya (Tohoku Gakuin Univ.)

P2-48 Mathematical Representation of Interaction between Elastic and Dielectric Energy in Piezoelectric Transducer Using Exponential Function of Matrix Michio Ohki (Natl.Def.Acad.)

P2-49 Resonance Patterns of Piezoelectric Partial-Drive Systems without Mechanical Impedance Matching Michio Ohki (Natl.Def.Acad.)

P2-50 Time transient analysis of a high speed optical microscanner Harumichi Sato , Maxim Lebedev , Jun Akedo (AIST) ,

P2-51 A micro-mass sensing method by QCM vibrator using Thickness Twist Mode Naotake Okada , Takayuki Kikuchi , Yukihisa Ohsugi (NGK Insulators)

P2-52 Propagation Characteristics of SH-Type Surface Acoustic Waves on Langasite with Thin Films Shouji Kakio , Masaya Nozawa , Yasuhiko Nakagawa (Yamanashi Univ.)

P2-53 Study of second harmonic in a nonlinear surface acoustic wave Yoshiaki Tokunaga , Toshio Nakaya , Atsushi Yasuno (Kanazawa Inst. Tech.) , Toshiharu Minamikawa (Industrial Research Institute of Ishikawa)

- P2-54 A Balanced SAW Oscillator for Short Range Transmitters
Yao-Huang Kao, Yi-Ran Wang(National Chiao-Tung Univ.)
- P2-55 Effect of Ultrasonic Wave on Degradation of Organic Chemical Substance
Yasumasa Yoshida,
Mamoru Kuwabara , Jian Yang(Nagoya Univ.)
- P2-56 Simultaneous Regional Actuation at Two Points in Object by Controlling Phase Between Acoustic Radiation Forces
Yoshifumi Nishio , Hideyuki Hasegawa , Hiroshi Kanai(Tohoku Univ.)
- P2-57 Imaging of Cross-Sectional Elasticity of Arterial Wall by Comparing Measured Change in Thickness with Model Waveform
Jiang Tang , Hideyuki Hasegawa , Hiroshi Kanai(Tohoku Univ.)
- P2-58 Change in Elasticity in Intima-Media Region of Brachial Artery Caused by Flow-Mediated Dilation
Masataka Sugimoto , Hideyuki Hasegawa , Hiroshi Kanai(Tohoku Univ.)
- P2-59 Construction of Reference Data for Classification of Elasticity Images of Arterial Wall
Jun Inagaki , Hideyuki Hasegawa , Hiroshi Kanai (Tohoku Univ.) , Masataka Ichiki(Sendai Hospital of East Railway Company) , Fumiaki Tezuka(Sendai Medical Center)
- P2-60 Analysis of thick phase distorted medium based on the ultrasonic speckle intensity
Tjundewo Lawu , Mitsuhiro Ueda(Tokyo Inst. of Tech.)
- P2-61 Development of Ultrasonic Propagation Analysis Method for Estimation of Inner State of Bone Phantom
Nobuyuki Endoh , Takenobu Tsuchiya , Yoshikazu Saito(Kanagawa Univ.)
- P2-62 Numerical analysis of temperature rise in tissue by ultrasound
Yoshikazu Saito , Takahiro Ishizeki , Takenobu Tsuchiya , Nobuyuki Endoh(Kanagawa Univ.)
- P2-63 Ultrasonic Rotary Motors Using Complex Transverse and Torsional Vibration Rods and Multiple BLT Transducers
Atsuyuki Suzuki , Masaki Kihara , Yasuhiro Katsumata , Naoki Kikuchi, Jiromaru Tsujino(Kanagawa Univ.)
- P2-64 Visualization of Acoustically Induced Cavitation
Bubbles and Microjets with the Aid of High Speed Camera
Takashi Kubo , Mamoru Kuwabara , Jian Yang (Nagoya Univ.)
- P2-65 Development and Evaluation of Electromagnetically Driven Wideband Ultrasonic Oscillator
Masashi Ohara , Takashi Kubo , Jian Yang ,

- Mamoru Kuwabara(Nagoya Univ.)
- P2-66 Temperature Distributions of Welding Specimens Using Various Frequency Ultrasonic Plastic Welding Systems
Misugi Hongoh , Masafumi Yoshikuni , Hiroyuki Miura , Yuji Koike , Tetsugi Ueoka , Jiromaru Tsujino(Kanagawa Univ.)
- P2-67 VHDL Description and Simulation of a High Resolution Control System for Linear Ultrasonic Motors
Cesar Rodrigues, Rafael Pippi, Andre Aita, Joao Martins(PPGEE-UFSM)
- P2-68 The underwater sound propagation on and around a seamount - preliminary results -
Yoshihisa Hiyoshi(AESTO) , Jun Naoi , Toshio Tsu chiya , Toshiaki Kikuchi(JAMSTEC)
- P2-69 Neural Network Application for Ship Radiated Noise
Kyu-Chil Park, Jong-Rak Yoon(Pukyong National Univ.)
Phil-Ho Lee (Agency for Defense Development)
- 10:20 ~ 10:30 Break**
- 10:30 ~ 11:15 Fundamentals, Surface wave devices**
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| Chairman
E-1 Phase transitions in [001]-oriented PMN-PT single crystal with compositions near the morphotropic phase boundary
E-2 Evaluation of ice films by picosecond acoustics
E-3 Ball SAW hydrogen sensor with amplitude and delay time response
 | Keiji Sakai (Univ. of Tokyo)
G.Shabbir, S.Kojima(Tsukuba Univ.)
Saori Kashiwada , Osamu Matsuda(Hokkaido Univ.) , Jeremy J. Baumberg(Southampton Univ.) , Oliver B. Wright(Hokkaido Univ.)
Akio Mizukami (Tohoku Univ.), Dong Youn Sim(Ball Semiconductor), Ichitaro Sato, Tetsuya Miyagishi, Hidekazu Tanaka, Takeshi Fukui, Hirohiko Kazato (Yamatake), Shingo Akao, Tsuneo Ohgi, Noritaka Nakaso(Toppan Printing) , Hideyuki Watanabe, Tsuyoshi Mihara, Kazushi Yamanaka(Tohoku Univ.) |
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- 11:15 ~ 12:00 Measurement techniques, Imaging, Nondestructive testing**
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| Chairman
F-1 Design of high frequency ultrasonic probes with separation between a transmitter and a receiver
F-2 A super-precision evaluation method of CTE for ultra-low expansion glasses using the LFB ultrasonic material characterization system
 | Mami Matuskawa (Doshisha Univ.)
Dong-Hyeon Kim , Kang-Lyeol Ha , Moo-Joon Kim (Pukyong National Univ.) Jonathan M. Cannata , K. Kirk Shung:(Southern California Univ.)
Jun-ichi Kushibiki , Mototaka Arakawa , Yuji Ohashi , Kouji Suzuki, Takahisa Maruyama(Tohoku Univ.)
F-3 Resonant Ultrasound Microscopy with an Isolated Langasite Oscillator for Quantitative Evaluation of Local Elastic Constant |
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Hirotsugu Ogi , Jiayong Tian, Toyokazu Tada ,
Masahiko Hirao(Osaka Univ.)

12:00 ~ 13:00 **Lunch, Steering Committee**
13:00 ~ 14:30 **Poster session 2**

14:30 ~ 15:15 **Invited lecture 2**
**Chairman Masatoshi Adachi (Univ. of Toyama
Prefecture)**

**INV-2 Down Scaling in Piezoelectrics and Polar
Materials: Microdevices, Nanofabrication, Small
Features and Size Effects (Tentative)**
**Nava Setter (Swiss Federal Institute of Technol
ogy)**

15:15 ~ 15:30 **Break**

15:30 ~ 16:15 **Invited lecture 3**
**Chairman Katsuhiro Kawashima (Tokyo Univ. of
Tech.)**

**INV-3 Real time imaging of surface acoustic waves on
crystals and microstructures**

Oliver B. Wright(Hokkaido Univ.)

16:15 ~ 16:45 **Photoacoustics, Acousto-optics**
Chairman Seiji Kojima (Tsukuba Univ.)

**G-1 Generation and detection of picosecond shear
strain pulses with ultrashort light pulses**

Osamu Matsuda , Oliver B. Wright (Hokkaido
Univ.) David H. Hurley (Idaho National Engineering
and Environmental Laboratory) , Vitalyi E. Gusev
(Maine Univ.) , Kennichi Shimizu(Keio Univ.)

**G-2 Elastic anomaly of glass transitions in Lithium
Silicate**

Anwar Hushur, Seiji Kojima(Tsukuba Univ.),
Masao Kodama(Sojo Univ.), Ben Whittington, Marty
Olesiak,

Mario Affatigato, Steven A. Feller(Coe College)

16:45 ~ 17:30 **Medical ultrasound, High power
ultrasound**

Chairman Shinichiro Umemura (Hitachi)

**H-1 Polyacrylamide-Gel Based Phantom for
Ultrasonic Elasticity Imaging**

Kenichi Kawahata (Hitachi) , Kouji Waki , Tuyoshi
Matsumura(Hitachi Medical) , Shinichiro Umemura
(Hitachi)

**H-2 Effects of Metal Particle Dopant on the Acoustic
Attenuation Properties of Si Rubber Lens for Medica
Echo Probe** Yohachi Yamashita ,
Yasuharu Hosono ,

Kazuhiro Itsumi(Toshiba)

**H-3 Performance characteristics of a 0.017cc linear
microactuator using flexural vibration in a pair of
asymmetric fins**

Yasuyuki Gouda ,

James Robert Friend ,

Kentaro Nakamura , Sadayuki Ueha(Tokyo Inst. of
Tech.)

17:45 ~ Banquet