

USE2012 Schedule

| | Nov. 13 (Tue) | Nov. 14 (Wed) | Nov. 15 (Thu) |
|-------|---|---|---|
| 9:00 | <p>9:50 Opening Ceremony</p> | <p>8:50-9:50 2E5-1~4 Biomedical Ultrasound Chair: Shin-ichi Takeuchi (Toin University of Yokohama)</p> | <p>8:50-9:50 3J2-1~4 Measurement Techniques, Imaging, Nondestructive Evaluation Chair: Tsuyoshi Mihara (Toyama University)</p> |
| 10:00 | <p>10:00-11:00 1J2-1~4 Measurement Techniques, Imaging, Nondestructive Evaluation Chair: Yasuaki Watanabe (Tokyo Metropolitan University)</p> | <p>9:55-11:55 Poster Session 2P1-1~10, 2P2-1~13, 2P3-1~7, 2P4-1~11, 2P5-1~13, 2P6-1~5 Chair: Tatsuro Matsuoka (Nagoya University)</p> | <p>9:55-11:55 Poster Session 3Pa1-1~9, 3Pa2-1~12, 3Pa3-1~6, 3Pa4-1~9, 3Pa5-1~12, 3Pa6-1~5 Chair: Jun Kondoh (Shizuoka University)</p> |
| 11:00 | <p>11:05-12:05 1Ja3-1~4 Piezoelectric Devices Chair: Tomo Fujii (Chiba University)</p> | | |
| 12:00 | <p>12:05-13:05 Lunch Time</p> | <p>11:55-12:55 Lunch Time</p> | <p>11:55-12:55 Lunch Time</p> |
| 13:00 | <p>13:05-13:55 Invited Talk 1 Yuji Goto (Osaka University) Chair: Hirotsugu Ogi (Osaka University)</p> | <p>12:55-13:45 Invited Talk 2 Michael M. Driscoll (Northrop Grumman Electronic Systems) Chair: Kazushi Yamanaka (Tohoku University)</p> | <p>12:55-13:45 Invited Talk 3 Shin-ichiro Umemura (Tohoku University) Chair: Nobuki Kudo (Hokkaido University)</p> |
| 14:00 | <p>14:00-16:00 Poster Session 1P1-1~9, 1P2-1~12, 1P3-1~7, 1P4-1~9, 1P5-1~11, 1P6-1~5 Chair: Tadashi Yamaguchi (Chiba University)</p> | <p>13:50-14:35 2E1-1~3 Physical Acoustics, Acousto-Optics Chair: Oliver Wright (Hokkaido University)</p> | <p>13:50-15:50 Poster Session 3Pb1-1~8, 3Pb2-1~12, 3Pb3-1~6, 3Pb4-1~9, 3Pb5-1~12, 3Pb6-1~4 Chair: Takenobu Tsuchiya (Kanagawa University)</p> |
| 15:00 | | <p>14:35-15:20 2E3-1~2, 2E6-1 Piezoelectric Devices, Ocean Acoustics Chair: Jun-ichi Kushibiki (Tohoku University)</p> | |
| 16:00 | | <p>15:25-16:10 2E4-1~3 High Power Ultrasound, Sonochemistry Chair: Kentaro Nakamura (Tokyo Institute of Technology)</p> | |
| 17:00 | <p>16:05-17:20 1J5-1~5 Biomedical Ultrasound Chair: Koji Masuda (Tokyo University of Agriculture and Technology)</p> | <p>16:10-16:55 2E2-1~3 Measurement Techniques, Imaging, Nondestructive Evaluation Chair: Mitsutaka Hikita (Kogakuin University)</p> | <p>15:55-16:40 3J4-1~3 High Power Ultrasound, Sonochemistry Chair: Kyuichi Yasui (Advanced Industrial Science and Technology)</p> |
| | | <p>16:55-17:25 Awards Ceremony</p> | <p>16:45-18:00 3J5-1~4, 3J6-1 Biomedical Ultrasound, Ocean Acoustics Chair: Nobuyuki Endoh (Kanagawa University)</p> |
| 18:00 | <p>17:25-18:10 1J1-1~2, 1Jb3-1 Physical Acoustics, Acousto-Optics, Piezoelectric Devices Chair: Akira Harata (Kyushu University)</p> | <p>17:25-19:25 Banquet</p> | <p>18:00 Closing Session</p> |
| 19:00 | | | |

The 33rd Symposium on Ultrasonic Electronics (USE 2012) Program

† Speaker

* Applying to Young Scientists Award

Tuesday, November 13

9:50-10:00 OPENING

10:00-11:00 Measurement Techniques, Imaging, Nondestructive Evaluation

Chair: Yasuaki Watanabe (Tokyo Met. Univ.)

- 1J2-1*** Flow-injection wireless-electrodeless QCM system combined with total internal reflection fluorescence microscopy **1**
Masahiko Fukushima[†], Kentaro Uesugi, Hirotsugu Ogi, Hisashi Yagi, Yuji Goto, Masahiko Hirao (Osaka Univ.)
- 1J2-2** The trial of an array type acoustic impedance measuring device **3**
Kazuki Higuchi[†], Kazuto Kobayashi (Honda Electronics)
- 1J2-3*** Improvement of air temperature measurement accuracy on ultrasonic probe utilizing sound attenuation **5**
Takahiro Motegi[†], Koichi Mizutani, Naoto Wakatsuki (Univ. of Tsukuba)
- 1J2-4** Optical tomographic imaging of picosecond pulses with 200 nm spatial resolution **7**
Motonobu Tomoda^{1†}, Hiroyuki Matsuo¹, Roberto Li Voti², Osamu Matsuda¹, Oliver B. Wright¹
(¹Hokkaido Univ.; ²Univ. of Roma)

11:00-11:05 Break

11:05-12:05 Piezoelectric Devices

Chair: Tomo Fujii (Chiba Univ.)

- 1Ja3-1** Ultra wide band resonators using SH type plate wave and their application **9**
Michio Kadota[†], Takashi Ogami, Tetsuya Kimura (Murata Mfg.)
- 1Ja3-2*** Reduction of transverse SAW leakage on the resonator based on Al/42° YX-LiTaO₃ substrate structure **11**
Tomoya Komatsu[†], Hiroyuki Nakamura, Hidekazu Nakanishi, Tetsuya Turunari, Joji Fujiwara
(Panasonic Corp.)
- 1Ja3-3*** MEMS-based varactor fabricated by gold electroplating for tunable SAW filter application **13**
Akira Konno^{1†}, Hideki Hirano¹, Mao Inaba², Ken-ya Hashimoto², Masayoshi Esashi¹, Shuji Tanaka¹
(¹Tohoku Univ.; ²Chiba Univ.)
- 1Ja3-4*** Control of Zn- or O-polar c-axis oriented ZnO films by different ion bombardment conditions to the substrate **15**
Ryo Ikoma^{1†}, Takahiko Yanagitani², Shinji Takayanagi¹, Masashi Suzuki², Hiroyuki Odagawa³, Mami Matsukawa¹
(¹Doshisha Univ.; ²Nagoya Inst. of Tech.; ³Kumamoto Natl. Coll. of Tech.)

12:05-13:05 LUNCH TIME

13:05-13:55 Invited Talk 1

Chair : Hirotsugu Ogi (Osaka Univ.)

- 1I-1** Ultrasonication-triggered amyloid fibrillation of proteins **17**
Yuji Goto (Osaka Univ.)

13:55-14:00 Break

14:00-16:00 Poster Session Chair: Tadashi Yamaguchi (Chiba Univ.)

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| 1P1-1 | Photoacoustic imaging of knee cartilage mouse using a semiconductor laser Takuya Izumi [†] , Yusuke Miida, Ryo Nagaoka, Mika Sato, Yuji Matsuura, Yoshihiro Hagiwara, Yoshifumi Saijo (Tohoku Univ.) | 19 |
| 1P1-2 | Perfectly matched layers of elastic wave propagation in a piezoelectric solid in the frequency domain Koji Hasegawa [†] , Shingo Sato (Muroran Inst. of Tech.) | 21 |
| 1P1-3 | Phase deviation in switching of optical QPSK pulse train by collinear acoustooptic device Nobuo Goto ^{1†} , Yasumitsu Miyazaki ² (¹ Univ. of Tokushima; ² Aichi Univ. of Tech.) | 23 |
| 1P1-4* | Numerical dispersion of elastic wave propagation in finite difference time domain analysis Takao Shimada ^{1†} , Koji Hasegawa ² , Shingo Sato ² (¹ Tsuyama Natl. Coll. of Tech.; ² Muroran Inst. of Tech.) | 25 |
| 1P1-5* | Brillouin scattering study of glass transitions in glucose aqueous solution Ayane Tominaga [†] , Tomohiko Shibata, Haruki Takayama, Seiji Kojima (Univ. of Tsukuba) | 27 |
| 1P1-6* | Time-resolved imaging of negative refraction of surface acoustic waves in two-dimensional phononic crystals Hiroaki Koga ^{1†} , Motonobu Tomoda ¹ , Osamu Matsuda ¹ , Ryota Chinbe ¹ , Hirotaka Sakuma ¹ , Paul H. Otsuka ¹ , Istvan A. Veres ² , Oliver B. Wright ¹ (¹ Hokkaido Univ.; ² Res. Center for Non-Destructive Testing) | 29 |
| 1P1-7 | Propagation of laser-induced emergent stress waves generated by high-energy nanosecond laser pulse irradiation in confined structure Koji Aizawa [†] , Shoichi Yoshida, Tomoya Makino, Yoshiaki Tokunaga (Kanazawa Inst. of Tech.) | 31 |
| 1P1-8 | Development of large size diamond wafer Shinichi Shikata [†] , Hideaki Yamada, Nobuteru Tsubouchi, Yoshiaki Mokuno, Akiyoshi Chayahara (AIST) | 33 |
| 1P1-9* | Sub-terahertz-frequency attenuation and sound velocity of GaN at cryogenic temperatures studied by picosecond ultrasound spectroscopy Akira Nagakubo ^{1,2†} , Yuki Tsutsui ¹ , Hirotsugu Ogi ¹ , Nobutomo Nakamura ¹ , Masahiko Hirao ¹ (¹ Osaka Univ.; ² JSPS Res. Fellow) | 35 |
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| 1P2-2 | Studies on the sedimentation dynamics of silica suspensions by means of dynamic ultrasound scattering method Kazuki Sugita [†] , Tomohisa Norisuye, Qui Tran-Cong-Miyata (Kyoto Inst. of Tech.) | 39 |
| 1P2-3* | Time-resolved imaging of GHz surface acoustic waves in TeO₂ through the photoelastic effect Atsuki Uetsuji [†] , Osamu Matsuda, Motonobu Tomoda, Hirotaka Sakuma, Oliver B. Wright (Hokkaido Univ.) | 41 |
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| 1P2-5 | Visualization of ultrasonic fields transmitted through inhomogeneous media and evaluation of the degree of aberration Masahiro Ohno [†] , Takeshi Nagaishi, Akihiro Iwabuchi (China Inst. of Tech.) | 45 |
| 1P2-6* | Ultrasound open channel flow velocity profile measurement based on the lateral directional ultrasound echo observations Mitsuhide Ishigamori ^{1†} , Ichiro Nishimura ² , Akira Yamada ¹ (¹ Tokyo Univ. of A&T; ² Tokyo Denki Univ.) | 47 |
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| | Natsuki Tobita, Mitsutaka Hikita [†] (Kogakuin Univ.) | |
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| | Yuka Mishima ^{1†} , Yoshinori Miyamoto ¹ , Toyoki Sasakura ² (¹ Tokyo Univ. of Marine Sci. and Tech.; ² Fusion) | |

16:00-16:05 Break

16:05-17:20 Biomedical Ultrasound

Chair: Koji Masuda (Tokyo Univ. of A&T)

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| | Soichiro Harigane [†] , Ryo Miyasaka, Shin Yoshizawa, Shin-ichiro Umemura (Tohoku Univ.) | |

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| 1J5-4* | Focus control method aided by numerical simulation in heterogeneous media for HIFU treatment Ryuta Narumi ^{1,4†} , Kosuke Matsuki ¹ , Takashi Azuma ¹ , Kohei Okita ^{2,4} , Akira Sasaki ¹ , Kiyoshi Yoshinaka ³ , Shu Takagi ^{1,4} , Yoichiro Matsumoto ¹ (¹ Univ. of Tokyo; ² Nihon Univ.; ³ AIST; ⁴ RIKEN) | 131 |
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| 17:25-18:10 Physical Acoustics, Acousto-Optics, Piezoelectric Devices Chair: Akira Harata (Kyushu Univ.) | | |
| 1J1-1* | Precise measurement of elastic constant of isotopically controlled diamond thin films using Brillouin oscillation method Kenta Morigami ^{1†} , Akira Nagakubo ¹ , Hirotsugu Ogi ¹ , Masahiko Hirao ¹ , Hideyuki Watanabe ² , Shinichi Shikata ² (¹ Osaka Univ.; ² AIST) | 135 |
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Wednesday, November 14

8:50-9:50 Biomedical Ultrasound

Chair: Shin-ichi Takeuchi (Toin Univ. of Yokohama)

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| 2E5-2* | Three-dimensional interactive detection and localization of small metastatic foci in human lymph nodes using high-frequency quantitative ultrasound Jonathan Mamou ^{1†} , Emi Saegusa-Becroft ² , Alain Coron ^{3,4} , Michael L. Oelze ⁵ , Masaki Hata ² , Junji Machi ² , Eugene Yanagihara ² , Pascal Laugier ^{3,4} , Tadashi Yamaguchi ⁶ , Ernest J. Feleppa ¹ (¹ F. L. Lizzi Center for Biomedical Eng.; ² Univ. of Hawaii and Kuakini Medical Center; ³ UPMC; ⁴ CNRS; ⁵ Univ. of Illinois; ⁶ Chiba Univ.) | 143 |
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9:50-9:55 Break

9:55-11:55 Poster Session

Chair: Tatsuro Matsuoka (Nagoya Univ.)

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| | Kotaro Nakamura [†] , Ayumu Asai, Keisuke Takada, Hiroshi Sasaki, Hiroki Okano, Shin Yoshizawa, Shin-ichiro Umemura (Tohoku Univ.) | |
| 3Pa5-8* | Efficient generation of cavitation bubbles in gel phantom by dual-frequency ultrasound exposure | 387 |
| | Jun Yasuda [†] , Ayumu Asai, Shin Yoshizawa, Shin-ichiro Umemura (Tohoku Univ.) | |
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| | Shin Tanaka [†] , Suguru Sakuma, Takenobu Tsuchiya, Nobuyuki Endoh (Kanagawa Univ.) | |
| 3Pa5-10* | Effect of BSA concentration on cavitation bubbles in gel phantom | 391 |
| | Ayumu Asai [†] , Jun Yasuda, Hiroki Okano, Shin Yoshizawa, Shin-ichiro Umemura (Tohoku Univ.) | |

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| | Hirofumi Sasaki [†] , Shinnosuke Hirata, Hiroyuki Hachiya (Tokyo Inst. of Tech.) | |
| 3Pa6-1* | Localization of acoustic reflective boundary using microphone array of small number of elements | 397 |
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| 3Pa6-2* | A study of reciprocal sound propagation and water flow at Hashirimizu port | 399 |
| | Hanako Ogasawara [†] , Kazuyoshi Mori, Toshiaki Nakamura (Natl. Defense Academy) | |
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| | Yoshiaki Tsurugaya ^{1†} , Toshiaki Kikuchi ² , Koichi Mizutani ³ (¹ Sanyo PT; ² Natl. Defense Academy; ³ Univ. of Tsukuba) | |
| 3Pa6-4 | Sound refocusing simulation using time reversal mirror in a shallow water environment | 403 |
| | Bok Kyoung Choi [†] , Byoung-Nam Kim, Seong Hyeon Kim, Bong-Chae Kim (Korea Inst. of Ocean Sci. and Tech.) | |
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| | Seom-Kyu Jung [†] , Dong Wan Lee, Dong-Hyeok Shin, Yong-Kuk Lee, Bok Kyoung Choi, Bong-Chae Kim, Byoung-Nam Kim (Korea Inst. of Ocean Sci. and Tech.) | |

11:55-12:55 LUNCH TIME

12:55-13:45 Invited Talk 3

Chair : Nobuki Kudo (Hokkaido Univ.)

| | | |
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| | Shin-ichiro Umemura ^{1†} , Ken-ichi Kawabata ² , Shin Yoshizawa ¹ (¹ Tohoku Univ.; ² Hitachi) | |

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13:50-15:50 Poster Session

Chair: Takenobu Tsuchiya (Kanagawa Univ.)

| | | |
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| 3Pb1-1* | CuO-doped (K,Na)NbO₃ lead-free piezoelectric ceramics synthesized with hydrothermal powders | 409 |
| | Yuriko Yokouchi ^{1†} , Takafumi Maeda ¹ , Peter Bornmann ² , Tobias Hemsell ² , Takeshi Morita ¹ (¹ Univ. of Tokyo; ² Univ. of Paderborn) | |
| 3Pb1-2* | Elastic stiffness of magnetic thin film at high temperatures monitored by picosecond ultrasound | 411 |
| | Yohei Nakamichi [†] , Nobutomo Nakamura, Hirotsugu Ogi, Masahiko Hirao, Masayoshi Nishiyama (Osaka Univ.) | |
| 3Pb1-3 | Behavior of dielectric mode in complex series dynamics for electromechanical coupling systems | 413 |
| | Michio Ohki [†] (Natl. Defense Academy) | |
| 3Pb1-4* | Giant electromechanical coupling in c-axis oriented ScaAlGaN films | 415 |
| | Kazuya Ito [†] , Masashi Suzuki, Takahiko Yanagitani (Nagoya Inst. of Tech.) | |
| 3Pb1-5* | Rectification of elastic waves in nanowires | 417 |
| | Daichi Kono [†] , Yukihiro Tanaka, Norihiko Nishiguchi (Hokkaido Univ.) | |
| 3Pb1-6 | Measurements of acoustical physical constants and their temperature coefficients for langasite family crystals | 419 |
| | Yuji Ohashi ^{1†} , Hitoshi Yoshida ² , Tomoaki Karaki ³ , Tao Lv ³ , Masatoshi Adachi ³ , Jun-ichi Kushibiki ¹ (¹ Tohoku Univ.; ² Kyocera Crystal Device; ³ Toyama Pref. Univ.) | |
| 3Pb1-7* | Formation of MPB in (Na_{0.5}K_{0.5})NbO₃-BaZrO₃-(Bi_{0.5}Li_{0.5})TiO₃ lead-free piezoelectric ceramics | 421 |
| | Junta Zushi ^{1†} , Takuma Ariizumi ¹ , Seiji Kojima ¹ , Ruiping Wang ² , Hiroshi Bando ² (¹ Univ. of Tsukuba; ² AIST) | |
| 3Pb1-8* | Measurement of thermal diffusivity by photopyroelectric method for the density controlled sintered SiC | 423 |
| | Shin Watanabe [†] , Yoichi Okamoto, Hisashi Miyazaki, Jun Morimoto (Natl. Defense Academy) | |

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| 3Pb2-1* | Modified image reconstruction technique for ultrasonic TOF-CT | 425 |
| | Hiroya Fujii ^{1†} , Kazunari Adachi ¹ , Hirotaka Yanagida ¹ , Tomoki Hoshino ¹ , Tomoya Nishiwaki ² (¹ Yamagata Univ.; ² Tohoku Univ.) | |
| 3Pb2-2 | Development of non contact air coupled ultrasonic testing for large structure | 427 |
| | Junjie Chang ^{1†} , Katsumi Ohira ¹ , Yukio Ogura ¹ , Kiyokazu Toiyama ² , Koichiro Kawashima ³ (¹ Japan Probe; ² Hiroshima Pref. Tech. Res. Inst.; ³ Ultrasonic Material Diagnosis Lab.) | |
| 3Pb2-3* | Development of high-sensitive biosensor using diffusion of ultrahigh-frequency phonons in ultrathin films | 429 |
| | Katsufumi Uehara [†] , Hirotsugu Ogi, Masahiko Hirao (Osaka Univ.) | |
| 3Pb2-4* | Influence of Doppler shift in ultrasonic distance and velocity measurement using M-sequence modulated signals | 431 |
| | Kazunori Ogasawara ^{1†} , Shinnosuke Hirata ¹ , Hiroyuki Hachiya ¹ (Tokyo Inst. of Tech.) | |
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| | Koji Shimaya, Tsuyoshi Mihara [†] , Hatsuzo Tashiro (Univ. of Toyama) | |
| 3Pb2-6 | Study on water distribution imaging in the soil using propagation velocity of sound, -The horizontal and the vertical water distribution imaging- | 435 |
| | Tsuneyoshi Sugimoto ^{1†} , Yutaka Nakagawa ¹ , Takashi Shirakawa ¹ , Motoaki Sano ¹ , Motoyoshi Ohaba ² , Sakae Shibusawa ² (¹ Toin Univ. of Yokohama.; ² Tokyo Univ. of A&T) | |
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| | Satoshi Hagihara ^{1†} , Toshihiro Tsuji ¹ , Toru Oizumi ¹ , Nobuo Takeda ¹ , Shingo Akao ^{1,2} , Tsuneo Ohgi ² , Takayuki Yanagisawa ² , Noritaka Nakaso ² , Kazushi Yamanaka ¹ (¹ Tohoku Univ.; ² Toppan Printing) | |
| 3Pb2-9* | Three-dimensional sound field analysis using compact explicit FDTD method with GPU cluster system | 441 |
| | Takuto Ishii ^{1†} , Takao Tsuchiya ¹ , Kan Okubo ² (¹ Doshisha Univ.; ² Tokyo Met. Univ.) | |
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| 3Pb2-11 | Basic study on the soil water distribution measurement using stick type sound source and sensors | 445 |
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| 3Pb2-12* | Nonlinear ultrasound characterization of fatigue damage in pure copper | 447 |
| | Yutaka Ishii [†] , Yuuki Kusanagi, Toshihiro Ohtani (Shonan Inst. of Tech.) | |
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| | Shin-nosuke Suzuki ^{1†} , Takuya Ogawa ¹ , Manabu Ishihara ¹ , Yukio Kobayashi ¹ , Nagaya Okada ² , Kazuto Kobayashi ² (¹ Oyama Natl. Coll. of Tech.; ² Honda Electronics) | |
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| | Shinji Takayanagi ^{1†} , Takahiko Yanagitani ² , Kosuke Imamura ¹ , Ryo Ikoma ¹ , Takeshi Sugimoto ¹ , Mami Matsukawa ¹ (¹ Doshisha Univ.; ² Nagoya Inst. of Tech.) | |
| 3Pb3-4* | Evaluation of piezoelectric and electrooptic properties in reverse-proton-exchanged X-cut LiNbO₃ optical waveguides | 455 |
| | Yoshio Sakai [†] , Shoji Kakio (Univ. of Yamanashi) | |
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| | Shunsuke Iwamoto [†] , Ryosuke Saigusa, Shoji Kakio (Univ. of Yamanashi) | |
| 3Pb3-6* | ScAlN multilayer second overtone mode resonator fabricated by Al₂O₃ ingot sputter deposition | 459 |
| | Masashi Suzuki ^{1†} , Takahiko Yanagitani ¹ , Hiroyuki Odagawa ² (¹ Nagoya Inst. of Tech.; ² Kumamoto Natl. Coll. of Tech.) | |
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| | Keiji Yokoyama ^{1†} , Hideki Tamura ¹ , Kentaro Masuda ² , Takehiro Takano ¹ (¹ Tohoku Inst. of Tech.; ² Sumida Electric) | |

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| 3Pb4-3* | A study on the efficiency of multiple degrees of freedom ultrasonic motor using combination of travelling wave type stators | 465 |
| | Takuo Umezawa [†] , Kensuke Shimizu, Hiroshige Hanyu, Toshinao Yamashina, Shunsuke Shimura, Yoshikazu Koike (Shibaura Inst. of Tech.) | |
| 3Pb4-4 | Study on a rotary-linear 2-DOF micro ultrasonic motor | 467 |
| | Jian Wang [†] , Yang Bai, Jifeng Guo (Zhejiang Univ.) | |
| 3Pb4-5 | π shaped ultrasonic motor with multi-degree of freedom. | 469 |
| | Takaaki Ishii, Ryota Inoue [†] , Tsuyoshi Shimizu (Univ. of Yamanashi) | |
| 3Pb4-6* | Evaluation of a vibrator for a cryogenic ultrasonic motor using titanium | 471 |
| | Dai Takeda [†] , Daisuke Yamaguchi, Takefumi Kanda, Koichi Suzumori ¹ , Yuya Noguchi (Okayama Univ.) | |
| 3Pb4-7 | Thermal characteristics of a PMN-PT single crystal and an ultrasonic motor in ultralow temperature environment | 473 |
| | Daisuke Yamaguchi [†] , Takefumi Kanda, Koichi Suzumori, Yuya Noguchi (Okayama Univ.) | |
| 3Pb4-8* | Ultrasonic power circulation-type quadratic excitation method for improvement in torque of coiled stator ultrasonic motor | 475 |
| | Kyouhei Kato ^{1†} , Masasumi Yoshizawa ¹ , Norio Tagawa ² , Takasuke Irie ³ , Tadashi Moriya ² (¹ Tokyo Met. Coll. of Industrial Tech.; ² Tokyo Met. Univ.; ³ Microsonic) | |
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| | Tadashi Moriya ^{1†} , Takasuke Irie ² , Masakazu Sato ² (¹ Tokyo Met. Univ.; ² Microsonic) | |
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| | Wenli Wu ^{1†} , Tatsuya Higuchi ² , Jonathan Mamou ³ , Hiroyuki Hachiya ² , Tadashi Yamaguchi ¹ (¹ Chiba Univ.; ² Tokyo Inst. of Tech.; ³ F. L. Lizzi Center for Biomedical Eng.) | |
| 3Pb5-2* | Characterization of rat liver tissue by measuring the acoustic characteristics in high frequency | 481 |
| | Kenta Inoue ^{1†} , Jonathan Mamou ² , Kazuto Kobayashi ³ , Yoshifumi Saijo ⁴ , Tadashi Yamaguchi ¹ (¹ Chiba Univ.; ² F. L. Lizzi Center for Biomedical Eng.; ³ Honda Electronics; ⁴ Tohoku Univ.) | |
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| 3Pb5-4* | Shear wave generation in living body by mode conversion of longitudinal wave at elasticity boundary | 485 |
| | Kohei Nii ^{1†} , Norio Tagawa ¹ , Kan Ookubo ¹ , Shin-ichi Yagi ² (¹ Tokyo Met. Univ.; ² Meisei Univ.) | |
| 3Pb5-5* | Measurement of micro-displacement of polyvinyl alcohol induced by acoustic radiation force – comparison of laser-Doppler velocimetry and high frequency ultrasound | 487 |
| | Ryo Nagaoka ^{1†} , Takuya Izumi ¹ , Komatsu Yosuke ¹ , Kazuto Kobayashi ² , Yoshifumi Saijo ¹ (¹ Tohoku Univ.; ² Honda Electronics) | |
| 3Pb5-6* | Evaluation of a method for strain imaging in arterial wall by synthesizing ultrasonic echo based on strain distribution obtained by finite element analysis | 489 |
| | Kazuki Shiratori [†] , Hideyuki Hasegawa, Hiroshi Kanai (Tohoku Univ.) | |
| 3Pb5-7 | Ultrasound backscatter measurement in cancellous bone using a membrane hydrophone | 491 |
| | Atsushi Hosokawa [†] (Akashi Natl. Coll. Tech.) | |
| 3Pb5-8* | Ultrasonic wave properties of bone marrow in human femur and tibia | 493 |
| | Kazuki Fujimori ^{1†} , Satoshi Kawasaki ¹ , Takeshi Kawakami ² , Teruhisa Mihata ³ , Mami Matsukawa ¹ (¹ Doshisha Univ.; ² Kita-Osaka Police Hospital; ³ Osaka Medical Coll.) | |
| 3Pb5-9* | Effects of crosslinking condition of collagen on ultrasonic wave properties in bovine cortical bone | 495 |
| | Daisuke Suga [†] , Daiki Shirotani, Ryo Tsubota, Mami Matsukawa (Doshisha Univ.) | |
| 3Pb5-10 | A trial of human bone cross-sectional imaging <i>in vivo</i>, using ultrasonic echo waves | 497 |
| | Isao Mano ^{1†} , Kaoru Horii ² , Mami Matsukawa ¹ , Takahiko Otani ¹ (¹ Doshisha Univ.; ² Oyo Electric) | |
| 3Pb5-11 | Development of a bone-conducted ultrasonic hearing aid (BCUHA) for the profoundly deaf: Evaluation of sound quality using semantic differential method | 499 |
| | Seiji Nakagawa [†] , Chika Fujiyuki, Takayuki Kagomiya (AIST) | |

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| 3Pb5-12 | Long-distance propagation of ultrasound in human body - experimental and numerical study using 3-D elastic human model | 501 |
| | Yoshiki Nagatani [†] (Kobe City Coll. of Tech.) | |
| 3Pb6-1 | Oceanic ambient noise generated by breaking surf in the sandy coast | 503 |
| | Bong-Chae Kim [†] , Bok Kyoung Choi, Byoung-Nam Kim (Korea Inst. of Ocean Sci. & Tech.) | |
| 3Pb6-2 | Detection of possible biogenic acoustic signals and ambient noise on deep seafloor in Sagami bay | 505 |
| | Ryoichi Iwase [†] (JAMSTEC / JST, CREST) | |
| 3Pb6-3 | A basic study of relationship between spatial distribution of noise sources and target scatterings observed in the sea trial of ambient noise imaging | 507 |
| | Kazuyoshi Mori ^{1†} , Hanako Ogasawara ¹ , Toshiaki Nakamura ¹ , Takenobu Tsuchiya ² , Nobuyuki Endoh ² (¹ Natl. Defense Academy; ² Kanagawa Univ.) | |
| 3Pb6-4 | High-speed underwater acoustic communication using orthogonal signal division multiplexing: A MIMO approach | 509 |
| | Tadashi Ebihara [†] (Univ. of Tsukuba) | |

15:50-15:55 Break

15:55-16:40 High Power Ultrasound, Sonochemistry

Chair: Kyuichi Yasui (Advanced Industrial Sci. and Tech.)

| | | |
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| 3J4-1* | Alignment of micro particles on a flat plate in liquid using MHz-standing wave field | 511 |
| | Jun-ichi Muraoka ^{1†} , Tsunehisa Suzuki ¹ , Kentaro Nakamura ² (¹ Yamagata Res. Inst. of Tech.; ² Tokyo Inst. of Tech.) | |
| 3J4-2 | Concentration of OH radicals in the interfacial region of cavitation bubbles | 513 |
| | Shin-ichi Hatanaka [†] (Univ. of Electro-Comm.) | |
| 3J4-3* | Consideration on effect of backing material on receiving characteristics of hydrophone suitable for measurement of high intensity sound field with acoustic cavitation | 515 |
| | Michihisa Shiiba ^{1†} , Yuuki Uemura ¹ , Nagaya Okada ² , Takeyoshi Uchida ³ , Tsuneo Kikuchi ³ , Minoru Kurosawa ⁴ , Shinichi Takeuchi ¹ (¹ Toin Univ. of Yokohama; ² Honda Electronics; ³ AIST; ⁴ Tokyo Inst. of Tech.) | |

16:40-16:45 Break

16:45-18:00 Biomedical Ultrasound, Ocean Acoustics

Chair: Nobuyuki Endoh (Kanagawa Univ.)

| | | |
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| 3J5-1* | Experimental study to produce multiple focal points of acoustic field for active path selection of microbubbles through multi-bifurcation | 517 |
| | Ren Koda ^{1†} , Jun Koido ¹ , Takumi Ito ¹ , Takashi Mochizuki ¹ , Kohji Masuda ¹ , Seiichi Ikeda ² , Fumihito Arai ² , Yoshitaka Miyamoto ³ , Toshio Chiba ³ (¹ Tokyo Univ. of A&T; ² Nagoya Univ.; ³ Natl. Center for Child Health and Development) | |
| 3J5-2 | Calibration method for elasticity evaluation of regenerating cartilage based on ultrasonic particle velocity | 519 |
| | Naotaka Nitta ^{1†} , Masaki Misawa ¹ , Kazuhiro Homma ¹ , Tsuyoshi Shiina ² (¹ AIST; ² Kyoto Univ.) | |
| 3J5-3* | Characteristics of electromechanical response of bone in the MHz range | 521 |
| | Masahiro Okino ^{1†} , Katsunori Mizuno ² , Takahiko Yanagitani ³ , Sabine Coutelou ¹ , Mami Matsukawa ¹ (¹ Doshisha Univ.; ² Univ. of Tokyo; ³ Nagoya Inst. of Tech.) | |
| 3J5-4* | Acoustically stimulated electromagnetic response in bones | 523 |
| | Natsumi Ohno ^{1†} , Miki Uehara ¹ , Hisato Yamada ¹ , Kenji Ikushima ¹ , Nobuo Niimi ² , Yosithugu Kojima ² (¹ Tokyo Univ. of A&T; ² Nippon Sigmax) | |
| 3J6-1* | Application of cellular polypropylene to ultrasonic transducers in water | 525 |
| | Toshikazu Horino ^{1†} , Tomoo Kamakura ¹ , Hideyuki Hideyuki ¹ , Hideo Adachi ¹ , Yoshinobu Yasuno ² (¹ Univ. of Electro-Comm.; ² Kobayasi Inst. of Physical Res.) | |

18:00-18:10 CLOSING