

## PROGRAM

### Tuesday 5 November

08:00-09:30

#### Registration

09:30-10:00

#### Opening session

##### Opening address

*Yoshinori Miyamoto*

*Chairman of AFAS2013 Steering Committee*

##### Welcome address

*Kohji Iida*

*Chairman of Asian Fisheries Acoustic Society*

##### Welcome address

*Nobuyuki Endoh*

*Chairman of Marine Acoustics Society of Japan*

Group photo

10:05-11:45

#### Invited lecture

Chair: *Kohji Iida*

- |       |  |      |
|-------|--|------|
| 10:05 | <b>International significance and trends of acoustic research</b><br><i>David A. Demer</i> | p.14 |
| 10:55 | <b>Fisheries application of autonomous underwater vehicle</b><br><i>Hayato Kondo</i>       | p.15 |

11:45-13:15

#### Lunch at a cafeteria in the University Hall

13:15-14:40

**Session I: Fisheries and ecosystem monitoring I (by SGES)**

Chair: *Kazushi Miyashita* (Chair of SGES), *Yong Tang*

- 13:15      **Diel acoustic characteristics and zooplankton composition of the sound scattering layer in I-Lan Bay, northeastern Taiwan**      p.16  
                 *○Szu-Chia Kao<sup>S</sup>, Ming-An Lee, and Kohji Iida*
- 13:30      **Spatial relationship between gray whale and zooplankton in the Bering and Chukchi Seas in early summer of 2013 using a quantitative echosounder**      p.17  
                 *○Yuka Iwahara<sup>S</sup>, Bungo Nishizawa, Keiko Sekiguchi, Yutaka Watanuki, Kazushi Miyashita, and Yoko Mitani*
- 13:45      **Year-round observation of sound scatters in the southern Chukchi Sea of the Arctic Ocean with a moored echosounder**      p.18  
                 *○Kazuo Amakasu<sup>Y</sup>, Minoru Kitamura, Shigeto Nishino, and Takashi Kikuchi*
- 14:00      **Long-term monitoring of fish aggregation flux around artificial reef using side-aspect acoustic system**      p.19  
                 *○Hyunbeen Lee<sup>Y</sup>, Donhyug Kang, Mira Kim, Yangjae Im*
- 14:15      **Acoustic evaluation of the efficacies of different types of artificial reefs deployed in water off Haiko, Pingtung County, Taiwan**      p.20  
                 *○Jen-Ming Liu, Shean-Ya Yeh, and His-Chi Ou*
- 14:30      Free discussion (10 min.)

14:40-14:55

**Break**

14:55-16:20

**Session II: Fisheries and ecosystem monitoring I (continued)**

Chair: *Tohru Mukai*, *Myounghee Kang*

- 14:55      **The study on behavior of fish on an artificial reef using hydroacoustic**      p.21  
                 *○Doo-Jin Hwang, Eun-A Yoon, Ayumi Takano, and Wan-Ki Kim*

- 15:10      **Remote monitoring of conditioned juvenile chum salmon (*Oncorhynchus keta*) in a cage using bottom-mounted echosounder and stereo-video camera system**      p.22  
                 *○Kouichi Sawada, Tomohiko Matsuura, Koki Abe, Ken Ishii, Tohru Mukai, Hiroyuki Okouchi, Norio Shirafuji, Yukio Matsumoto, Tadahide Kurokawa, Yoshiaki Fukuda, and Akihiko Hashiba*
- 15:25      **New 3G network based remote display fish finder system**      p.23  
                 *○Jianfeng Tong<sup>S</sup>, Yoshinori Miyamoto, Keiichi Uchida, Toyoki Sasakura, and Jun Han*
- 15:40      **Spatial and temporal distribution of hairtail (*Trichiurus lepturus*) in Bungo Channel, Japan**      p.24  
                 *○Wan-Yu Kao<sup>S</sup>, Makoto Tomiyasu, Ryuzo Takahashi, Michio Ogawa, Tarou Hirose, Kouhei Kurosaka, Sentarou Tsuru, Yasuhiro Sanada, Kenji Minami, and Kazushi Miyashita*
- 15:55      **Stock abundance of *Rastrelliger kanagurta* and its correlation with sea surface temperature off Sarawak waters**      p.25  
                 *○Raja Bidin Raja Hassan, Wan Muhd Azran Mohd Zuki, Muzzneena Ahmad Mustapha, and Rosdi Mohd Nor*
- 16:10      Free discussion (10 min.)
- 16:20-16:35  
                 **Break**
- 16:35-18:00  
                 **Session III: Echo-sounding systems and technology (by SGAT)**  
                 Chair: *Yasushi Nishimori* (Chair of SGAT), *Yoshimi Takao*
- 16:35      **Proposal for a fisheries quantitative echosounder**      p.26  
                 *Masahiko Furusawa*
- 16:50      **Development of the simple system for measurement of fish distribution in shallow water using GPS fish-finder**      p.27  
                 *○Souichirou Matsushita<sup>S</sup>, Yoshinori Miyamoto, Keiichi Uchida, Kouhei Hasegawa, and Toshiharu Kakihara*

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- 17:05     **Development of a new chirp echo sounder**     p.28  
          <sup>○</sup>*Satoshi Misonoo, Yuriko Ohnishi, Yoshihiro Nishiyama,  
          Shinji Ogawa*
- 17:20     **The measurement of fish close to the bottom by the broadband  
          split-beam echo sounder**     p.29  
          <sup>○</sup>*Tomohito Imaizumi<sup>Y</sup>, Kaoru Fujita, Shintaro Yamasaki,  
          Koki Abe, Koichi Sawada, Masanori Ito, Ikuo Matsuo,  
          Wang Youg, Yasushi Nishimori, Tomonari Akamatsu*
- 17:35     **Calibration of a high-frequency broadband echosounder using  
          a 38.1-mm-diameter tungsten carbide sphere**     p.30  
          <sup>○</sup>*Aito Takeishi<sup>S</sup>, Kazuo Amakasu, and Yoshinori Miyamoto*
- 17:50     Free discussion (10 min.)

18:30-20:00

**Welcome reception at the conference venue**

**Wednesday 6 November**

08:00-09:00

**Registration**

09:00-09:50

**Invited lecture**

Chair: *Kohji Iida*

- 09:00     **Listening to the Deep-Ocean: A global underwater noise  
          monitoring initiative**     p.31  
          <sup>○</sup>*Michel André, Mike van der Schaar, Ludwig Houégnigan,  
          Joan Castell, and Antonio M. Sánchez*

09:55-11:05

**Session IV: Passive acoustics and biotelemetry (by SGAA)**

Chair: *Yoshinori Miyamoto* (Chair of SGAA), *Tomohito Imaizumi*

- 09:55      **Passive acoustic monitoring of multiple cetacean species in the Istanbul strait**      p.32  
                    <sup>○</sup>*Tomonari Akamatsu, Ayhan Dede, Saho Kameyama, Arda M. Tonay, and Ayaka A. Öztürk*
- 10:10      **Underwater noise and behavior characteristics of pacific cod in Jinhae Bay, Korea**      p.33  
                    <sup>○</sup>*Hyeon-Ok Shin*
- 10:25      **Application equipment using correlation ASIC**      p.34  
                    <sup>○</sup>*Toyoki Sasakura*
- 10:40      **Acoustic estimation of effective gathering range of squid jigging boat equipped with fishing lights**      p.35  
                    <sup>○</sup>*Yoshimi Takao, Hideo Takahara, Takafumi Shikata, Susumu Namari, Toyoki Sasakura, and Toshihiro Watanabe*
- 10:55      Free discussion (10 min.)

11:05-11:20

**Break**

11:20-12:30

**Session V: Target strength of fish and zooplankton (by SGTS)**

Chair: *Kouichi Sawada* (Chair of SGTS), *Doo-Jin Hwang*

- 11:20      **Growth of swimbladder and acoustical behavior of walleye pollock (*Theragra chalcogramma*) larvae**      p.36  
                    <sup>○</sup>*Koki Abe, Hae-Kyun Yoo, Hideo Takahara, Jun Yamamoto, and Kazuo Amakasu*
- 11:35      **Ex situ, in situ, and modeld target strength estimation of the large jellyfish *Nemopilema nomurai***      p.37  
                    <sup>○</sup>*Eun-A Yoon<sup>Y</sup>, Doo-Jin Hwang, Miyuki Hirose, and Tohru Mukai*

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- 11:50      **Target strength of copepods (*Neocalanus cristatus*) with oil sacs at 120 kHz**      p.38  
                 °Yoshiaki Fukuda<sup>Y</sup>, Kouichi Sawada, and Tohru Mukai
- 12:05      **The effect of material properties on euphausiid (*Thysanoessa* spp.) target strength estimated using an acoustic scattering model**      p.39  
                 °Takuya Mizukami<sup>S</sup>, Kosuke Yamazaki, Tohru Mukai,  
                 Yoshiaki Fukuda, Kouichi Sawada, Kazuhiko Itaya,  
                 and Kohji Iida
- 12:20      Free discussion (10 min.)
- 12:30-13:45  
                 **Lunch at the cafeteria in the University Hall**
- 13:45-14:45  
                 **General meeting of AFAS**
- 14:45-15:45  
                 **Poster session**  
                 Chair: Kazuo Amakasu
- Acoustic detection of Harmful Algal Bloom's (red tide) in summer season 2013, south sea of the Korea**      p.40  
                 °Donhyug Kang, Hyungbeen Lee, and Yoon-ho Lee
- Geographical distribution of acoustic impedance in the head of harbour porpoise *phocoena phocoena***      p.41  
                 °Mika Kuroda<sup>S</sup>, Motoki Sasaki, Kazutaka Yamada,  
                 Nobuhiro Miki, and Takashi Matsuishi
- Seasonal variation of scattering strength in the estuary of Tan-Sui river, Taiwan**      p.42  
                 Szu-Chia Kao and °Ming-An Lee

15:45-17:10

**Session VI: Fisheries and ecosystem monitoring II (by SGES)**

Chair: *Raja Bidin Raja Hassan, Jun Han*

- 15:45      **Identification of zooplankton using three frequency difference methods around Funka bay, Hokkaido Japan**      p.43  
                 *○Eunho Kim<sup>S</sup>, Tohru Mukai, and Kohji Iida*
- 16:00      **Estimating the fishing efficiency of framed midwater trawl net and ring net using an acoustic method**      p.44  
                 *○Zhen Lu<sup>S</sup>, Kohji Iida, and Tohru Mukai*
- 16:15      **Semi-automated detection of giant jellyfish *Nemopilema nomurai* by echo trace analyses on high resolution echograms**      p.45  
                 *○Tomohiko Matsuura<sup>Y</sup>, Kazuhiro Sadayasu, Ryuichi Matsukura, and Yoshimi Takao*
- 16:30      **Application of an acoustic camera and echo sounder for understanding fish lengths and orientations**      p.46  
                 *○Myounghee Kang, Hui Zhang, and Qiwei Wei*
- 16:45      **Echoview - a software partnership for continuous development**      p.47  
                 *○Ian Higginbottom*
- 17:00      Free discussion (10 min.)

17:15-17:45

**Closing session**

18:30-20:30

**Banquet at Dai-ichi Hotel Tokyo Seafort (28F, Top of the bay)**