

## **Sunday, November 10, 2013 (Pre-conference) 研討會前會**

3:00 pm-5:00 pm: Reception 歡迎茶會

5:00 pm and after: Touring Chi-Jing Island (attractions: old fort, local seafood, and night market) 旗津導覽

## **Monday November 11, 2013 (Day 1) 第一天**

8:00 am – 8:45 am Registration/Breakfast 註冊/早餐

8:45 am – 9:00 am Opening Remarks 開場演說

9:00 am – 10:00 am Keynote Speech – Arthur B. Baggeroer (MIT): Acoustic Telemetry for the Last Decade and Challenges for the Next One (Keynote) 近十年聲學遙測技術的發展及未來十年的挑戰

10:00 am – 10:15 am Break 休息

10:15 am – 12:00 pm Technical Session I (3 Full Papers/23 min each and 3 Short Papers/12 min each)  
Chair: TBD

*PMAC: A Real-world Case Study of Underwater MAC* [Full paper] 水下 MAC 層之真實案例研究  
Son N Le (University of Connecticut, USA); Yibo Zhu (University of Connecticut, USA); Zheng Peng (University of Connecticut, USA); Jun-Hong Cui (University of Connecticut, USA); Zaihan Jiang (U.S. Naval Research Lab, USA)

*A Hybrid MAC Protocol with Channel-dependent Optimized Scheduling for Clustered Underwater Acoustic Sensor Networks* [Full paper] 針對群聚的水聲感測網路之混合 MAC 協議與因通道而異的最佳排程方法

Jithin Jagannath (University at Buffalo, USA); Anu Saji (University at Buffalo, SUNY, USA); Hovannes K. Kulhandjian (State University of New York at Buffalo, USA); Yifan Sun (State University of New York at Buffalo, USA); Emrecan Demirors (State University of New York at Buffalo, USA); Tommaso Melodia (State University of New York at Buffalo, USA)

*ROSS: Receiver Oriented Sleep Scheduling for Underwater Sensor Networks* [Full paper] 針對水聲感測網路之接收機導向的休眠協議

Lu Hong (Ocean University of China, P.R. China); Feng Hong (Ocean University of China, P.R. China); Bozhen Yang (Ocean University of China, P.R. China); Zhongwen Guo (Ocean University of China, P.R. China)

*Performance Validation of MAC Protocols in Underwater Acoustic Networks* [Short paper] 水聲網路 MAC 通訊協議之性能驗證

Qichao Zhao (UNSW, Australia); Andrew Lambert (University of New South Wales, Australia); Craig R Benson (University of New South Wales, Australia)

*Simulation and Experimental Verification of MAC Protocols for Underwater Acoustic Communication Network* [Short paper] 水聲網路 MAC 通訊協議層之模擬與實驗驗證

Qiao Gang (Harbin Engineering University, P.R. China); Jianmin Yang (Harbin Engineering University, P.R. China); Xuefei Ma (Harbin Engineering University, P.R. China); Yu Zhang (HiSilicon Technologies Co., Ltd., P.R. China); Hang Dong (CETC No. 38 Research Institute, P.R. China)

*Traffic Estimation Based Receiver Initiated MAC for Underwater Acoustic Networks* [Short paper] 水聲網路使用基於流量估測的接收機而觸發的 MAC 通訊協議

Lina Pu (University of Connecticut, USA); Yu Luo (University of Connecticut, USA); Zheng Peng (University of Connecticut, USA); Haining Mo (University of Connecticut, USA); Jun-Hong Cui (University of Connecticut, USA)

12:00 pm – 2:00 pm Lunch (Posters/Demos Setup) 午餐 及 海報/展示

2:00 pm – 3:15 pm Technical Session II (2 Short Papers/12 min each, 9 Extended Abstracts/5 min each)  
Chair: TBD

*Measurement System for Acoustic Monitoring of Rip Current* [Short paper] 以聲學方式量測暗流的量測系統

Iwao Nakano (Marine Acoustics Research Laboratory, Japan)

*On Capacity of Underwater Wireless Optical Channel* [Short paper] 水下無線光學通道之信息容量  
Yuhan Dong (Tsinghua University, P.R. China); Zhi Ge (Tsinghua University, P.R. China); Shijian Tang (Tsinghua University, P.R. China); Xuedan Zhang (Tsinghua University, P.R. China)

*Chaotic Modulations for Digital Underwater Acoustic Communications* [Extended Abstract] 數位水聲通訊之雜亂調變

Jun Wang (State Key Laboratory of Acoustics, Institute of Acoustics, P.R. China)

*Simulation of Time Varying Surface Effect in Underwater Communication Testing Platform* [Extended Abstract] 水聲通訊測試平台之水面時變效應的模擬

Andhi I Putu (National Cheng Kung University (NCKU), Taiwan); Yi-Wei Lin (National Cheng Kung University (NCKU), Taiwan); Gee-Pinn Too (National Cheng Kung University (NCKU), Taiwan)

*Underwater Localization Experiments Using Acoustic Ranging and Direction of Arrival Estimation* [Extended Abstract] 使用聲學測距及來源估測於水下定位實驗

Wouter van Kleunen (University of Twente, The Netherlands); Koen Blom (University of Twente, The Netherlands); Nirvana Meratnia (University of Twente, The Netherlands); Andre Kokkeler (University of Twente, The Netherlands); Paul Havinga (University of Twente, The Netherlands); Gerard Smit (University of Twente, The Netherlands)

*A Bidirectional TDMA Protocol for Underwater Acoustic Sensor Networks* [Extended Abstract] 水聲感測網路使用雙向 TDMA 通訊協議

Guangyu Fan (Zhejiang University, P.R. China); Huifang Chen (Zhejiang University, P.R. China); Lei Xie (Zhejiang University, P.R. China); Jun-Hong Cui (University of Connecticut, USA)

*On Marine Internet and Its Potential Applications for Underwater Inter-networking* [Extended Abstract]  
海洋網際網路及其可能應用於水下聯網

Shengming Jiang (Shanghai Maritime University, P.R. China)

*Joint DFE with LDPC Decoding for Anti-multipath Over Underwater Acoustic Channels* [Extended Abstract]  
合併 DFE 與 LDPC 解碼於對抗水聲通道之多重路徑效應

Shengxing Liu (Xiamen University, P.R. China); Shenyang Xiao (Xiamen University, P.R. China)

*Single-Carrier Block Transmission in Time Reversal Shortened Underwater Acoustic Channels* [Extended Abstract] 使用單載波塊狀傳輸模式於時間反轉縮短之水聲通道

Chengbing He (Northwestern Polytechnical University, P.R. China); Qunfei Zhang (Northwestern Polytechnical University, P.R. China); Jianguo Huang (Northwestern Polytechnical University, Xi'an, P.R. China); Jing Han (Northwestern Polytechnical University, P.R. China); Wentao Shi (Northwestern Polytechnical University, P.R. China)

*Potentials of Distributed Networked Underwater Sensing Systems* [Extended Abstract] 分散式網路化水下感測系統之應用潛力

T Yang (National Sun Yat-Sen University, Taiwan)

*Second-order Quantities Sensitivities of Underwater Acoustic Dyadic Sensors Combined with Accelerometers* [Extended Abstract]

Xinyi Sun (Harbin Engineering University, P.R. China); Desen Yang (Harbin Engineering University, P.R. China); Lianjin Hong (Harbin Engineering University, P.R. China)

3:15 pm – 3:30 pm Break

3:30 pm – 4:30 pm Technical Session III (11 Extended Abstracts, 5 min each)

*Study on Low-rate OOK and BPSK Transmission with PN Sequence in Shallow Water Acoustic Communication* [Extended Abstract]

Jinxing Hao (Tsinghua University, P.R. China); Jintao Wang (Tsinghua University, P.R. China); Yahong Rosa Zheng (Missouri University of Science and Technology, USA)

*Study of Speech Coding Algorithm Based on Contact Conduction Transmitter in Complicated Water Area* [Extended Abstract]

Ye Bai (Harbin Engineering University, P.R. China); Xueli Sheng (Harbin Engineering University, P.R. China); Chunyan Sun (Harbin Engineering University, P.R. China); Jin Han (Harbin Engineering University, P.R. China)

*Lake Trial of a Multi-Hop Underwater Acoustic Network for Ocean Transect Sampling* [Extended Abstract]  
F Tong (Xiamen University, P.R. China)

*Measured Channel Impulse Responses for a Mobile Source in the Northeastern Sea off Taiwan* [Extended Abstract]

Linus Chiu (National Sun Yat-sen University, Taiwan); Chi-Fang Chen (National Taiwan University, Taiwan)

*A New Amphibious Network Infrastructure with Hybrid Acoustic and Radio Links* [Extended Abstract]

Yun Liu (South China University of Technology, P.R. China); Fang-Jiong Chen (South China University of Technology, P.R. China); Fei Ji (South China University of Technology, P.R. China); Hua Yu (South China University of Technology, P.R. China); Jun Zhang (South China University of Technology, P.R. China)

*Influences of Sound Scattering on the Measuring of Vector Sensor by Different Installing Locations under Cylindrical Baffle* [Extended Abstract]

Guolong Liang (Harbin Engineering University, P.R. China); Fubin Pang (Harbin Engineering University, P.R. China); Guangpu Zhang (Harbin Engineering University, P.R. China)

*Design and Implementation of Distributed Underwater Acoustic Communication Network Simulator based on CORBA Middleware and Software-Defined MODEM* [Extended Abstract]  
Youwen Zhang (Harbin Engineering University, P.R. China)

*Fuzzy Demodulation of Frequency Hopped Underwater Acoustic Communication Signals* [Extended Abstract]  
Dongsheng Chen (University of Xiamen, P.R. China); F Tong (Xiamen University, P.R. China); Xiaomei Xu (Xiamen University, P.R. China)

*Design of a Small Acoustic Modem for Dense and Low-Cost Oceanographic Monitoring* Extended Abstract]  
Yue hai Zhou (Xiamen University, P.R. China); F Tong (Xiamen University, P.R. China)

*Energy Efficient Transmission Scheduling for Non-Stationary Underwater Acoustic Channels* [Extended Abstract]  
Beatrice Tomasi (University of Padova, Italy); James Preisig (Woods Hole Oceanographic Institution, USA)

*The Impact of Intensity Fluctuations on Network Throughput on Selected MAC* [Extended Abstract]  
Michael Zuba (University of Connecticut, USA); Tshi Yang (National Sun Yat-sen University, USA); Jun-Hong Cui (University of Connecticut, USA)

4:30 pm – 6:00 pm Poster/Demo Session, Chair: TBD

6:00 pm – 7:00 pm Beach party/social hour 海灘聯誼宴會

7:00 pm – Dinner 晚宴

**Tuesday November 12, 2013 (Day 2)**

8:00 am – 9:00 am Registration/Breakfast 註冊/早餐

9:00 am – 10:00 am Keynote Speech – William Kuperman (Scripps Institution of Oceanography, UCSD):  
Acoustic Model and Data-Based Signal Processing (Keynote) 水聲模型及基於資料的訊號處理

10:00 am – 10:15 am Break

10:15 am – 12:00 pm Technical Session IV (3 Full Papers/23 min each and 3 Short Papers/12 min each)  
Chair: TBD

*Parallel Combinatory Multicarrier Frequency-Hopped Spread Spectrum for Long Range and Shallow Underwater Acoustic Communications* [Full paper]

Chaowu Zhan (Communication Engineering Department of Xiamen University, P.R. China); Fang Xu (Communication Engineering Department of Xiamen University, P.R. China); Xiaoyi Hu (Communication Engineering Department of Xiamen University, P.R. China)

*Iterative Estimation of the Time-Varying Underwater Acoustic Channel Using Basis Expansion Models* [Full paper]

Hua Yu (South China University of Technology, P.R. China); Aijun Song (University of Delaware, USA); Mohsen Badiey (University of Delaware, USA); Fang-Jiong Chen (South China University of Technology, P.R. China); Fei Ji (South China University of Technology, P.R. China)

*Tracking Time-varying Correlated Underwater Acoustic Channels in the Signal Subspace* [Full paper]

Shan-Ho Huang (National Sun Yat-sen University, Taiwan); T Yang (National Sun Yat-Sen University, Taiwan); Jenho Tsao (National Taiwan University, Taiwan)

*Effective Self-Cancellation of Intercarrier Interference for OFDM Underwater Acoustic Communications* [Short paper]

Xilin Cheng (Colorado State University, USA); Miaowen Wen (Peking University, P.R. China); Xiang Cheng (Peking University, P.R. China); Liuqing Yang (Colorado State University, USA)

*Underwater Acoustic Network with Random Access: A Physical Layer Perspective* [Short paper]

Songtao Lu (Iowa State University, USA); Zhengdao Wang (Iowa State University, USA); Zhaohui Wang (Michigan Technological University, USA); Shengli Zhou (University of Connecticut, USA)

*Field Tests of Adaptive Modulation and Coding for Underwater Acoustic OFDM* [Short paper]

Lei Wan (University of Connecticut, USA); Hao Zhou (University of Connecticut, USA); Xiaoka Xu (University of Connecticut, USA); Yi Huang (University of Connecticut, USA); Shengli Zhou (University of Connecticut, USA); Zhijie Shi (University of Connecticut, USA); Jun-Hong Cui (University of Connecticut, USA)

12:00 pm – 2:00 pm Lunch Poster/Demo Session (Cont.) 中餐 海報/展示

2:00 pm – 3:45 pm Technical Session V [3 Full Papers/23 min each and 3 Short Papers/12 min each)  
Chair: TBD

*Performance Evaluation of Forwarding Protocols for the RACUN Network* [Full paper]

Cristiano Tapparello (University of Padova, Italy); Paolo Casari (University of Padova, Italy); Giovanni Toso (University of Padova, Italy); Ivano Calabrese (University of Padova, Italy); Roald Otnes (Norwegian Defence Research Establishment (FFI), Norway); Paul A. Van Walree (Forsvarets forskningsinstitutt, Norway); Michael Goetz (Fraunhofer FKIE, Germany); Ivor Nissen (Research Department for Underwater Acoustics and Marine Geophysics (FWG), Germany); Michele Zorzi (Università degli Studi di Padova, Italy)

*The Internet Underwater: An IP-compatible Protocol Stack for Commercial Undersea Modems* [Full paper]  
Yifan Sun (State University of New York at Buffalo, USA); Tommaso Melodia (State University of New York at Buffalo, USA)

*Joint Time Synchronization and Tracking for Mobile Underwater Systems* [Full paper]

Jinwang Yi (Xiamen University, P.R. China); Diba Mirza (University of California, San Diego, USA); Curt Schurgers (Earth, USA); Ryan Kastner (University of California, San Diego, USA)

*A Clock Synchronization Independent Localization Scheme for Underwater Wireless Sensor Networks*  
[Short paper]

Qiang Zhang (Zhejiang University, P.R. China); Senlin Zhang (Zhejiang University, P.R. China); Meiqin Liu (Zhejiang University, P.R. China)

*Research on Space Division Multiple Access Underwater Acoustic Communication* [Short paper]

Jing Wei Yin (Harbin Engineering University, P.R. China); Pengyu Du (Harbin Engineering University, P.R. China); Xin Wang (Harbin Engineering University, P.R. China)

*Least-Symbol-Error-Rate Adaptive Decision Feedback Equalization for Underwater Channel* [Short paper]

Beixiong Zheng (South China University of Technology, P.R. China); Fang-Jiong Chen (South China University of Technology, P.R. China); Fei Ji (South China University of Technology, P.R. China); Hua Yu (South China University of Technology, P.R. China)

3:45 pm – 4:00 pm Break

4:00 pm – 5:00 pm Panel “Toward Standardization in Underwater Acoustic Communications and Networking” 朝向水聲通訊及網路的標準化

5:00 pm – 6:00 pm Poster/Demo Session (Cont.) 海報/展示

6:30 pm – Conference Banquet 會議晚宴

## **Wednesday November 13, 2013 (Day 3) 第三天**

8:00 am – 8:30 am Registration/Breakfast 註冊/早餐

8:30 pm – 9:00 pm Plenary Speech – Jen-Hwa Guo (National Taiwan University, Taiwan): Title TBD

9:00 am – 10:00 am Technical Session VI, Invited Papers on Tools, Instruments, and Experiments (1 Full Paper/23 min and 3 Short Papers/12 min each)

Chair: TBD

*SUNSET version 2.0: Enhanced Framework for Simulation, Emulation and Real-life Testing of Underwater Wireless Sensor Networks* [Invited Full paper]

Chiara Petrioli (University of Rome "La Sapienza", Italy); Roberto Petroccia (University of Rome "La Sapienza", Italy); Daniele Spaccini (University of Rome "La Sapienza", Italy)

*Collision Avoidance Passive Sonar* [Invited Short paper]

Dale Green (Teledyne Benthos, USA); Steven McManus (Teledyne Benthos, USA)

*Experiments Conducted in the Marine Test Field at Sizihwan Coastal Area in Kaohsiung, Taiwan* [Invited Short paper]

Jin-Yuan Liu (National Sun Yat-sen University, Taiwan); Chen-Fen Huang (National Taiwan University, Taiwan); T Yang (National Sun Yat-Sen University, Taiwan); Yun-Wen Li (National Taiwan University, Taiwan)

*SeaLinx: A Multi-instance Protocol Stack Architecture for Underwater Networking* [Invited Short paper]

Son N Le (University of Connecticut, USA); Zheng Peng (University of Connecticut, USA); Jun-Hong Cui (University of Connecticut, USA); Janny Liao (AquaSeNT LLC, USA)

10:00 am – 10:15 am Break (Note: no poster session due to venue change)

10:15 am – 11:15 am Technical Session VII (1 Full Paper/23 min, 2 Short Papers/12 min each)

Chair: TBD

*Glider CT: Reconstructing Flow Fields from Predicted Motion of Underwater Gliders* [Full paper]

Wencen Wu (Georgia Institute of Technology, USA); Dongsik Chang (Georgia Institute of Technology, USA); Fumin Zhang (Georgia Institute of Technology, USA)

*Underwater Acoustic Remote Control Based on Time-Frequency Joint Coding* [Short paper]

Yan Wang (Harbin Engineering University, P.R. China); Nan Zou (Harbin Engineering University, P.R. China); Jin Fu (Harbin Engineering University, P.R. China); Guolong Liang (Harbin Engineering University, P.R. China)

*Experimental Demonstration of Time Reversal Communication in Doubly Dispersive Underwater Channels* [Short paper]

Wen-Jun Zeng (Tsinghua University, P.R. China); Zibin Yu (Zhejiang University, P.R. China); Wen Xu (Zhejiang University, P.R. China)

**11:15 am – 11:30 am Closing Remarks and Adjourn** 閉幕演說及散會

11:30 am and after: Lunch and Touring Buddha Museum 前往佛陀紀念館午宴

**Thursday November 14, 2013 (Post-conference)**

Possible tour to Kenting National Park 可能前往墾丁國家公園