

2014 IEEE Sensor Systems for a Changing Ocean

(SSCO 2014)

Brest, France
13 – 17 October 2014



IEEE Catalog Number: CFP1460Z-POD
ISBN: 978-1-4799-5949-5

TABLE OF CONTENTS

Performance Of The Minifluo-UV Sensor For Monitoring Ocean And Coastal Environments	1
<i>M. Goutx, C. Bachet, N. Ferretto, C. Germain, C. Guigue, M. Tedetti</i>	
A Sensor Web Architecture for Sharing Oceanographic Sensor Data.....	2
<i>S. Jirka, E. Delory, M. Toma, J. Rio</i>	
Long Term In Situ Survey Of Total Dissolved Iron Concentrations On The MoMAR Observatory	6
<i>A. Laes-Huon, J. Legrand, V. Tanguy, C. Cathalot, J. Blandin, J. Rolin, P. Sarradin</i>	
Hidroboya TM: The 'Sample&Hold' Platform In The Analog To Digital Understanding Of Our Waters.....	12
<i>X. Hernida</i>	
Biofilm Sensor for Deep Sea	16
<i>E. Diler, N. Larche, D. Thierry, Y. Degres</i>	
Marine Sensors; The Market, The Trends And The Value Chain	21
<i>J. Gille, L. Swart, I. Giannelos, E. Delory, A. Castro</i>	
NeXOS Contribution To The Adaptation Of System Analysis Engineering Tools For Mature And Reliable Ocean Sensors	35
<i>B. Galvan, A. Marco, J. Rolin, L. Delauney</i>	
Implementation Of A Fast Coral Detector Using A Supervised Machine Learning And Gabor Wavelet Feature Descriptors	41
<i>E. Tusa, A. Reynolds, D. Lane, N. Robertson, H. Villegas, A. Bosnjak</i>	
Coastal Observatory As A Development Platform For Marine Instrumentation	47
<i>Y. Auffret, P. Bouvet, A. Loussert, L. Amate, D. Munck</i>	
Range And Depth Estimation Of Bowhead Whale Calls In The Arctic Using A Single Hydrophone	51
<i>J. Bonnel, A. Thode</i>	
Passive Acoustic Monitoring Of Coastal Dynamical Oceanographic Phenomena Using Single Hydrophone.....	55
<i>B. Kinda, J. Bonnel</i>	
Smart Electronic Interface for Web Enabled Ocean Sensor Systems	60
<i>D. Toma, S. Jirka, E. Delory, J. Pearlman, J. Rio</i>	
Underwater Spectrophotometric Detection: Scaling Down Ocean Acidification Monitoring.....	64
<i>E. Reggiani, R. Bellerby, K. Sorensen</i>	
Maintaining Quality of Acoustic Data: Calibration Methods for Active and Passive Devices, with Extended Sampling Volume.....	69
<i>K. Foote</i>	
Intelligent Sensors – Why They Are So Important For Future Ocean Observing Systems	74
<i>C. Waldman, J. Tio, D. Toma, T. O'Reilly, J. Pearlman</i>	
Development Of Environmental Sensors For Monitoring Of Corrosion In Marine Offshore And Wind Energy Industries	79
<i>M. Yasri, R. Khalifeh, B. Lescop, F. Gallee, E. Diler, D. Thierry, S. Rioual</i>	
Underwater Acoustic Communication Messaging Time Stamp Applied To Global Time Synchronization	83
<i>O. Pallares, J. Rio, P. Bouvet</i>	
The Trans-National Access in FP7 and H2020: A Tool For Sensor Testing, Observing System Validation And Collaborative Research	88
<i>S. Sparnocchia, P. Farcy, E. Delory</i>	
NeXOS Development Plans In Ocean Optics, Acoustics And Observing Systems Interoperability	91
<i>E. Delory, A. Castro, C. Waldmann, J. Rolin, P. Woerther, J. Gille, J. Rio, O. Zielinski, L. Golmen, N. Hareide, J. Pearlman</i>	
Developing A New Generation Of Passive Acoustics Sensors For Ocean Observing Systems	94
<i>E. Delory, D. Toma, J. Rio, P. Ruiz, L. Corradino, P. Brault, F. Fiquet</i>	
COMMON SENSE: Cost-Effective Sensors, Interoperable With International Existing Ocean Observing Systems, To Meet EU Policies Requirements.....	99
<i>J. Cleary, M. McCaul, D. Diamond, M. Garcia, C. Diez, C. Rovira, Y. Lassoued, A. Ribotti, J. Saez, M. Challiss</i>	
Optimization Of A Wi-Fi Radio Antenna for Underwater Applications	105
<i>G. Makhoul, F. Le Pennec</i>	
Underwater Potentiostat For Real-Time Electrochemical Corrosion Measurements	107
<i>I. Masmitja, J. Rio, J. Damborenea, A. Conde</i>	

Low-Cost Inertial Measurement of Ocean Waves 111

D. Kennedy, M. Walsh, B. O'Flynn

Author Index