Fast Preview

Note: This is not exactly what the published abstract will look like

Autonomous Mission Design and Data Fusion: Laying the groundwork for Decadal Mission swath altimetry and ocean vector winds.

Bruce M Howe [1] (+18089560466; bhowe@hawaii.edu)
Payman Arabshahi [2] (+12062216990; payman@apl.washington.edu)
Steven Businger [1] (+18089562569; businger@hawaii.edu)
Yi Chao [3] (+18183548168; Yi.Chao@jpl.nasa.gov)
Steve Chien [3] (+18183935320; steve.chien@jpl.nasa.gov)
Andrew Gray [2] (+16267576903; aagray@u.washington.edu)

[1]School of Ocean and Earth Science and Technology, University of Hawaii, 1680 East-West Road, Honolulu, HI 96822, United States
[2]Applied Physics Laboratory, University of Washington, 1013 NE 40th Street, Seattle, WA 98105, United States
[3]Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109, United States

In the coming decade, the autonomous coordinated utilization of space, atmospheric, surface, and ocean assets, sensor webs, and data will assume more importance, as systems become more complex and tightly integrated, and as the need to know our environment with ever greater accuracy and precision becomes more acute. We have begun to address this issue with a prototype virtual ocean observatory that includes present and future NASA satellite missions (Jason-2 and QuikSCAT; and SWOT [swath altimetry] and XOVWM [ocean vector winds], respectively); atmosphere and ocean models (WRF/LAPS and ROMS, respectively); and in-situ sensors and platforms (underwater gliders). In our prototype system, the goal is to develop the architecture and implementation of the necessary software modules (e.g., automated data fusion/assimilation, and automated planning technology) to achieve adaptive in-situ sampling through feedback from space-based-assets (in this case via the SWOT simulator) thereby contributing to the orbit design during the first, experimental phase (~6-9 months) of the SWOT mission. This work is one step in the process of infusing technology into the development pipeline.

Meeting:
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Membership Number:
Bruce M Howe
AGU - ho921667

Contact Information:
Bruce M Howe
School of Ocean and Earth Science and Technology, University of Hawaii 1680 East-West Road
Honolulu, HI 96822, United States
ph : +18089560466
fax : +18089563498
e-mail : bhowe@hawaii.edu

Student rate:
Not Applicable

Willing to chair a session:

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IN - Earth and Space Science Informatics

Special Session:
IN13 - Information Technology Infusion - Successful Strategies

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Theme:

Material presented:
0%

Contributed

Poster presentation requested:
Assign by Program Comm

Scheduling request:
any time except friday afternoon