## ARCTIC AND NORTHERN OCEANS FORUM

FINNISH METEOROLOGICAL INSTITTE (FMI), HELSINKI

2 – 4 September 2019

This is a single-track workshop which allows for flexibility in the timing of sessions. The breaks for coffee and lunch are fixed by catering constraints. This Provisional Program may be amended in detail to accommodate invited speakers who have not been able to confirm their attendance. Speakers have a total time of 30-minutes to change the lecturn, make the presentation and answer questions.

<table>
<thead>
<tr>
<th>MONDAY 2 Sep 19</th>
<th>ACTIVITY</th>
<th>SPEAKER</th>
<th>PRESENTATION TITLE</th>
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</thead>
<tbody>
<tr>
<td>1330 h</td>
<td>Message from Honorary Chair</td>
<td>Marina Ruggieri</td>
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<tr>
<td></td>
<td>History of ANOF and ASOF</td>
<td>Mal Heron</td>
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<td></td>
<td>FMI perspective</td>
<td>Mikko Strahlendorff</td>
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<tr>
<td>1400 h</td>
<td>Session 1a. Observation Technologies: In situ Observations: Chair Mal Heron</td>
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<tr>
<td>1400 h</td>
<td>Invited Speaker</td>
<td>Bill Kirkwood</td>
<td>AUVs under ice.</td>
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<tr>
<td>1430 h</td>
<td>Contributed Paper</td>
<td>Jhon Hurtado</td>
<td>Submersible vehicle operated remotely for physical and chemical characterization of Arctic Pole “INIUT”</td>
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<tr>
<td>1500 h</td>
<td>Contributed Paper</td>
<td>Bin Cheng</td>
<td>Snow and ice thickness derived from thermistor string based mass balance buoys (SIMBA)</td>
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<tr>
<td>1530 h</td>
<td>Coffee Break</td>
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<tr>
<td>1600 h</td>
<td>Invited Speaker</td>
<td>Andreas Marouchos</td>
<td>Autonomous observations in Extreme Environments: Polar navigation of an unmanned surface vehicle.</td>
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<tr>
<td>1630 h</td>
<td>Session 1b. Observation Technologies: Sea Ice. Chair: Andreas Marouchos</td>
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<tr>
<td>1630 h</td>
<td>Contributed Paper</td>
<td>Pradeep Bobby</td>
<td>Modeling VHF scatter from FY and MY ridges.</td>
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<tr>
<td>1700 h</td>
<td>End of Day 1</td>
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<tr>
<td>Time</td>
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<tr>
<td>0900 h</td>
<td>Session 1b. <strong>continued</strong></td>
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<tr>
<td>0900 h</td>
<td>Contributed paper</td>
<td>Juha Karvonen</td>
<td>Estimating Arctic sea ice properties by microwave remote sensing in high resolution</td>
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<tr>
<td>0930 h</td>
<td>Contributed Paper</td>
<td>Jaako Seppanen</td>
<td>Merged CS2 and SMOS sea ice thickness product and comparison to sonar sea ice draft measurements</td>
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<tr>
<td>1000 h</td>
<td>Contributed Paper</td>
<td>Jaako Seppanen</td>
<td>Merged CS2 and SMOS sea ice thickness product and comparison to sonar sea ice draft measurements</td>
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<tr>
<td>1030 h</td>
<td>Coffee Break</td>
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<tr>
<td>1100 h</td>
<td>Session 1c. Observation Technologies: Remote Sensing. Chair: Marko Makynen</td>
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<tr>
<td>1100 h</td>
<td>Contributed paper</td>
<td>Adriano Camps</td>
<td>FSSCat: Observing the polar regions with the Flexible Microwave Payload (FMPL) – 2, and validation plan in MOSAIC</td>
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<tr>
<td>1130 h</td>
<td>Contributed Paper</td>
<td>Eero Rinne</td>
<td>Overview and status of the Copernicus Polar Ice and Snow Mission CRISTAL.</td>
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<tr>
<td>1200 h</td>
<td>Lunch</td>
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<tr>
<td>1500 h</td>
<td>Coffee Break</td>
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<tr>
<td>1530 h</td>
<td>Session 2: Applied Data Science for Arctic Ecosystems Under Change. Chair: Adriano Camps</td>
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<tr>
<td>1530 h</td>
<td>Invited Paper</td>
<td>Juha Lemmetyinen</td>
<td>To be advised</td>
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<tr>
<td>1600 h</td>
<td>Contributed Paper</td>
<td>Andrea Marinoni</td>
<td>Unmixing feature sets in PolSAR images for enhanced understanding of Arctic scenarios</td>
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<td>Time</td>
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<tr>
<td>1630 h</td>
<td>Workshop Panel: Moderator Rene Garello</td>
<td>Andrea Marinoni, Yubao Qiu, Mikko Strahlendorff, Juha Lemmetyinen</td>
<td>Future needs for Applied Data Science for Arctic Ecosystems Under Change</td>
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<tr>
<td>1730 h</td>
<td>End of Day 2 Sessions</td>
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<td></td>
<td>Evening</td>
<td>Conference Dinner</td>
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<td>Wednesday 4 Sep 19</td>
<td>ACTIVITY</td>
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<td>0900 h</td>
<td>Session 3: Sustaining Arctic Observations: Chair Bill Kirkwood</td>
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<td>Rene Garello</td>
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<tr>
<td>0930 h</td>
<td>Invited Paper</td>
<td>Stein Sandven</td>
<td>INTAROS</td>
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<tr>
<td>1000 h</td>
<td>Coffee Break</td>
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<tr>
<td>1030 h</td>
<td>Workshop Panel: Moderator Bill Kirkwood</td>
<td>Rene Garello, Andrea Marinoni, Andreas Marouchos, Stein Sandven</td>
<td>Future needs for sustained Arctic Observations</td>
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<tr>
<td>1130 h</td>
<td>Session 4: The Role of IEEE in the North and South Poles. Moderator: Adriano Camps</td>
<td>Rene Garello, Andreas Marouchos, Mal Heron</td>
<td>The Role of IEEE in the North and South Poles.</td>
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<tr>
<td>1230 h</td>
<td>End of Day 3 Sessions</td>
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<tr>
<td>1230 h</td>
<td>End of Arctic and Northern Oceans Forum</td>
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