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. Speakers have a total time of 30-minutes to change the lecturn, make the presentation and answer questions.

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| MONDAY 2 Sep 19 | ACTIVITY | SPEAKER | PRESENTATION TITLE |
| 1330 h | Welcome to ANOF | Rene Garello |  |
|  | Message from Honorary Chair | Marina Ruggieri |  |
|  | History of ANOF and ASOF | Mal Heron |  |
|  | FMI persective | Mikko Strahlendorff |  |
| 1400 h | Session 1a. Observation Technologies: *In situ* Observations: Chair Mal Heron |  |  |
| 1400 h | Invited Speaker | Bill Kirkwood | AUVs under ice. |
| 1430 h | Contributed Paper | Jhon Hurtado | Submersible vehicle operated remotely for physical and chemical characterization of Arctic Pole “INIUT” |
| 1500 h | Contributed Paper | Bin Cheng | Snow and ice thickness derived from thermistor string based mass balance buoys (SIMBA) |
| 1530 h | Coffee Break |  |  |
| 1600 h | Invited Speaker | Andreas Marouchos | Autonomous observations in Extreme Environments: Polar navigation of an unmanned surface vehicle. |
| 1630 h | Session 1b. Observation Technologies: Sea Ice. Chair: Andreas Marouchos |  |  |
| 1630 h | Contributed Paper | Pradeep Bobby | Modeling VHF scatter from FY and MY ridges. |
| 1700 h | End of Day 1 |  |  |
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| Tuesday 3 Sep 19 | ACTIVITY | SPEAKER | PRESENTATION TITLE |
| 0900 h | Session 1b. *continued* |  |  |
| 0900 h | Contributed paper | Juha Karvonen | Estimating Arctic sea ice properties by microwave remote sensing in high resolution |
| 0930 h | Contributed Paper | Jaako Seppanen | Merged CS2 and SMOS sea ice thickness product and comparison to sonar sea ice draft measurements |
| 1000 h | Contributed Paper | Jaako Seppanen | Merged CS2 and SMOS sea ice thickness product and comparison to sonar sea ice draft measurements |
| 1030 h | Coffee Break |  |  |
| 1100 h | Session 1c. Observation Technologies:  Remote Sensing. Chair: Marko Makynen |  |  |
| 1100 h | Contributed paper | Adriano Camps | FSSCat: Observing the polar regions with the Flexible Microwave Payload (FMPL) – 2, and validation plan in MOSAIC |
| 1130 h | Contributed Paper | Eero Rinne | Overview and status of the Copernicus Polar Ice and Snow Mission CRISTAL. |
| 1200 h | Lunch |  |  |
| 1300 h | Workshop: Chair: Mal Heron  1300 h Breakout Groups  1400 h Workshop Plenary: Moderator Mal Heron; speakers are the Group Leaders and the Group Note-takers (appointed by each Group). |  | Future needs for Observation Technologies  Breakout Group a. In situ Observations: Leader Andreas Marouchos  Breakout Group b. Sea ice: Leader: Leader Pradeep Bobby  Breakout Group c. Remote Sensing: Leader: Rene Garello |
| 1500 h | Coffee Break |  |  |
| 1530 h | Session 2: Applied Data Science for Arctic Ecosystems Under Change. Chair: Adriano Camps |  |  |
| 1530 h | Invited Paper | Juha Lemmetyinen | Satellite mission proposals supporting Arctic observations |
| 1600 h | Contributed Paper | Andrea Marinoni | Unmixing feature sets in PolSAR images for enhanced understanding of Arctic scenarios |
| 1630 h | Workshop Panel: Moderator Rene Garello | Andrea Marinoni, Yubao Qiu, Mikko Strahlendorff, Juha Lemmetyinen | Future needs for Applied Data Science for Arctic Ecosystems Under Change |
| 1730 h | End of Day 2 Sessions |  |  |
| Evening | Conference Dinner |  |  |
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| Wednesday 4 Sep19 | ACTIVITY | SPEAKER | PRESENTATION TITLE |
| 0900 h | Session 3: Sustaining Arctic Observations: Chair Bill Kirkwood |  |  |
| 0900 h | Invited Paper | Rene Garello | Sustaining Arctic Observations |
| 0930 h | Invited Paper | Stein Sandven | INTAROS |
| 1000 h | Coffee Break |  |  |
| 1030 h | Workshop Panel: Moderator Bill Kirkwood | Rene Garello, Andrea Marinoni, Andreas Marouchos, Stein Sandven | Future needs for sustained Arctic Observations |
| 1130 h | Session 4: The Role of IEEE in the North and South Poles. Moderator: Adriano Camps | Rene Garello, Andreas Marouchos, Mal Heron | The Role of IEEE in the North and South Poles. |
| 1230 h | End of Day 3 Sessions |  |  |
| 1230 h | End of Arctic and Northern Oceans Forum |  |  |