UAK Research school 2024: Espegrend marine biological station 10-14 June

**Program**

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| **Monday - June 10th** | |
| **Joint Acoustics and Optics: Lecture Room** | |
| 0830-1000 | Meet at Espegrend. Move into rooms. |
| 1000-1030 | Arne: Welcome, practicalities, introduction of instructors and students |
| 1030-1115 | Peter Worcester (SIO): Underwater Acoustics Overview Lecture |
| 1115-1200 | Daniel and Arne: Optics Overview Lecture |
| 1200-1300 | LUNCH |
| 1300-1345 | Torunn Sagen (UiB): Fjord oceanography Lecture |
| 1345-1430 | Espen Storheim: Lecture/practical exercise: Safety, ropes and knots. |
| 1430-1500 | Peter Worcester: Lecture/practical work: O-rings and connectors |

**After 1500 Optics and Acoustics separate**

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| **Tuesday - June 11th** | | | |
| **Optics** | | **Acoustics** | |
|  |  | Until 0825 | Breakfast Tidy rooms Clean common areas. |
| 0830 | Meet to start loading boat | 0825 | Meet in lecture room. |
| 0900-1200 | Measurements from the boat, station A and B\* (time permitting):  - Secchi depth - Ramses surface - ACS profile and surface - RBR CTD+tridente, and LISST-200X profile, profile and surface - Water samples: 15L from surface at both locations | 0830-1200 | Data processing and preparations: - Plot sound speed profiles and make ray predictions.  - Plan locations and depths for the active source transmissions. - Prepare and stage equipment for fieldwork. |
| 1200-1300 | LUNCH | 1200-1300 | LUNCH |
| 1300-1800 | Labwork: - Filteration and water sample procedures - Chl-a and SPM measurements | 1300-1600 | Fieldwork:  - Take CTD's - Deploy acoustic recorder and instrument array. |
|  |  | 1600-1800 | Rinse equipment, offload data, charge batteries, and secure metadata. |

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| **Wednesday - June 12th** | | | |
| **Optics** | | **Acoustics** | |
|  |  | Until 0825 | Breakfast Tidy rooms Clean common areas. |
| 0830 | Meet to start loading boat | 0825 | Meet in lecture room. |
| 0900-1200 | **Group A:** Measurements from the boat, station A and C - Secchi depth - Ramses surface - ACS profile and surface - RBR CTD+tridente, and LISST-200X profile, profile and surface - Water samples: 15L from surface at both locations **Group B:** Data processing | 0830-0915 | Lecture: Espen Storheim - Practical introduction to data management |
|  |  | 0930-1200 | Data processing and preparations: - Prepare acoustic sources for transmissions. - Prepare and stage equipment for fieldwork. |
| 1200-1300 | LUNCH | 1200-1300 | LUNCH |
| 1300-1800 | Group A: Filtration Group B: Radiative transfer modelling | 1300-1600 | Fieldwork:  - Transmit source signals at planned locations.  - Recover recorders |
|  |  | 1600-1800 | Rinse equipment, offload data, charge batteries, and secure metadata. |

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| **Thursday - June 13th** | | | |
| **Optics** | | **Acoustics** | |
|  |  | Until 0825 | Breakfast Tidy rooms Clean common areas. |
| 0830 | Meet to start loading boat | 0825 | Meet in lecture room |
| 0900-1200 | **Group B:** Measurements from the boat, station A and C - Secchi depth - Ramses surface - ACS profile and surface - RBR CTD+tridente, and LISST-200X profile, profile and surface - Water samples: 15L from surface at both locations **Group A:** Data processing | 0830-1200 | Data processing and preparations: - Process acoustic data. - Plot spectrograms of active and passive recordings. - Prepare and stage equipment for fieldwork. |
| 1200-1300 | LUNCH | 1200-1300 | LUNCH |
| 1300-1800 | Group B: Filtration Group A: Radiative transfer modelling | 1300-1600 | Fieldwork: - Take CTD's - Additional source transmissions - Transmission of custom sound signals |
|  |  | 1600-1800 | Rinse equipment, offload data, charge batteries, and secure metadata. |

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| **Friday - June 14th** | |
|  | **Joint Acousitcs and Optics: Lecture Room** |
| Until 0825 | Breakfast Tidy rooms Clean common areas. |
| 0825 | Meet in lecture room |
| 0830-1200 | Students work on preparing presentations/Instructors pack instruments and equipment |
| 1200-1300 | LUNCH |
| 1300-1330 | Student Presentations: Optics Group A |
| 1330-1400 | Student Presentations: Active Acoustics |
| 1400-1430 | Student Presentations: Optics Group B |
| 1430-1500 | Student Presentations: Passive Acoustics |
| 1500-1530 | Audiovisual competition |
| 1530 | Closing remarks and summary |
| 1600-1700 | Clean rooms and common areas.  Move out. |