Automated Vehicles in Arctic Marine Research and More

Arctic is changing, it is cold, dark for half of the year, and there are challenges and uncertainties not commonly found in other development areas. Scientific explorations in this harsh environment will push technology to its limits. There is a need for innovative approaches, in part because we cannot operate in conventional ways in Arctic areas. Norwegian University of Science and Technology has more than 20 years of extensive experimental investigations in Svalbard, the Barents and Kara Seas regions. Our AUR- and UAV-Lab is running a common pool of advanced aerial and underwater equipment and provide robotic platforms and instruments for deployment in Arctic. In this talk, we will discuss challenges of UAV and AUV operations in the remote and harsh conditions. I shall describe a generic recipe for successful use of automated vehicles in Arctic marine research.