UAA Professional Development Seminar Series

Refrigeration and Compression Processes in Cold Climates

Presented by Dr. Eivind Brodal, Assistant Professor UiT

Alaska and Norway, where I come from, have much in common, such as a cold climate and large fishing and oil/gas industries. This talk will focus on my research related to these similarities. The low ambient temperatures typical of the Arctic are potentially beneficial in some industrial applications, such as cooling in liquefied natural gas (LNG) production and carbon capture and storage (CCS) processes. To take full advantage of the benefit of low ambient temperature in energy-intensive processes, and to compare systems located in different climates fairly, numerical modeling and optimization techniques have been used to explore different processes. The results show that the energy efficiency and optimal design of such systems depends strongly on the ambient temperature, giving performance advantages