Salt in snow:
A "villain" affecting the accuracy of Arctic sea ice thickness estimates from radar satellites?

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Radar remote sensing has demonstrated its capability to characterize basin-scale Arctic sea ice thickness. For example, the European Space Agency's CryoSat-2 mission provides radar altimeter data that are used to derive estimates of sea ice thickness and volume. These data are crucial to understanding recent variability and changes in Arctic sea ice. But are their estimates accurate and properly addressed? This talk will first provide a grassroots-level understanding of how radar altimetry is used to estimate sea ice freeboard and thickness? To answer challenges faced by the CryoSat-2 science community to accurately estimate sea ice thickness, this talk will also focus on how saline snow cover on sea ice critically impacts the accuracy of sea ice freeboard and thickness estimates from CryoSat-2. The talk will conclude by discussing my proposed post-doctoral research to produce accurate sea ice thickness estimates from the Canadian Arctic, after accounting for snow property-induced errors on CryoSat-2 radar signals.