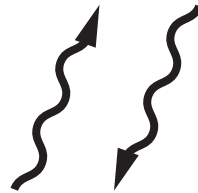
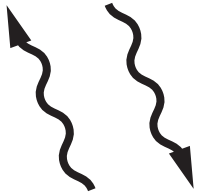


Remote Sensing of Sea Ice

with radar, microwaves, ...



interaction of
EM waves with
brine and
polycrystalline
microstructures,
rough surfaces



sea ice thickness
ice concentration

INVERSE PROBLEM

Recover sea ice properties from
electromagnetic (EM) data ϵ^*

effective complex permittivity
(dielectric constant, conductivity)

Analytic Continuation Method

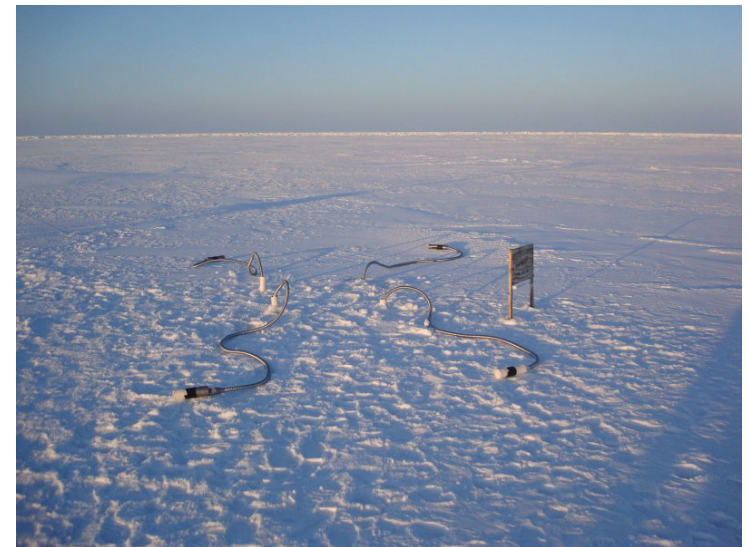
forward and inverse problems

Bergman (78) - Milton (79)

integral representation for ϵ^*

Golden and Papanicolaou (83)

Milton, Theory of Composites (02)



brine volume fraction
brine inclusion connectivity