

What is our research about?

Using methods of **homogenization and statistical physics** to model sea ice effective behavior and advance representation of sea ice in climate models, process studies, ...

Inputs, Ingredients

COMPOSITE MATERIALS

electrical engineering,
stealth technology

porous media,
oil extraction

statistical mechanics
of ferromagnets

Anderson localization,
semiconductor physics

random matrix theory

differential equations



MODELING SEA ICE

microscale

mesoscale

macroscale

Outputs, Impacts

CLIMATE MODELING

sea ice physics
& biology

composites,
polycrystals

remote sensing

advection diffusion

biomedical imaging,
biomaterials, EPS

polar microbial ecology



Physics of sea ice drives advances in many areas of science and engineering.