

Notes for the geo4432- tiling exercise

Load FinseSWEpdf.mat (x= SD, p = area fraction)

- ➔ Assume $\rho_s = 333 \text{ kg m}^{-3}$
- ➔ Convert x to SWE (divide by 3)

Load forcing: meteoFinse20162018_AromeNorway_apr2018.mat

Extract the period 2016 May 1– 2016 Oct 1

```
idx=find(time>=datenum(2016,5,1)&time<datenum(2016,10,1));
```

use the script from SEBlab1 to calculate SEB and melt rates

- ➔ Assume $\alpha = 0.7$
- ➔ Assume $TS = 0^\circ\text{C}$
- ➔ Assume same turbulent exchange as in SEBlab1
- ➔ Neglect precip
- ➔ Neglect conductive heat

Each starts from a different initial SWE (0.333, 0.666, 1,2.6666) no need to calculate 0m SWE...

Put results together in terms of SCA: basically convert your results to $\text{snow} = \text{SWE} > 0$ (binary 1/0),

Weighting according to the PDF area fraction p

At the end we should obtain a timeseries of fractional SCA.