

Define constants and parameters, surface and bed topography, meltwater input, sliding velocity, initial subglacial geometry, initial hydraulic head, boundary conditions



Calculate Reynolds number, transmissivity, and melt rate



Solve **Eq. (13)** for hydraulic head distribution



Update Reynolds number, transmissivity, and melt rate



Check for convergence of head



Explicitly step forward in time and update subglacial geometry using **Eq. (2)**

