Water pressure evolution beneath glaciers

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In Greenland, ice makes its way from the interior of the ice sheet, where it falls as snow, to the margins, where it melts, via fast flowing glaciers. These glaciers flow fast due to the presence of water at the glacier bed, transported through a series of cavities and channels. The permeability of the subglacial hydrology network evolves over the course of each year, as instabilities in the ice-water interface lead to the development of an efficient channel network. I will describe progress in modelling the evolution of the drainage network through the lens of pattern formation and tie this to the future dynamics of the ice sheet.