Lecture videos

There are pre-recorded lecture videos for this course at http://www.maths.ox.ac.uk/lecture-capture (you'll need to sign in with your Oxford SSO, navigate to 2020/2021 -> Part C/ OMMS -> Michaelmas Term -> C5.11 Mathematical Geoscience)

I'll be adding them through the term. I am writing (quite sparse) notes on my tablet so some bits may be a little slow - they probably work quite well watched at x1.25 speed. The sound should get better after a few videos because I got a better microphone.

The lectures will have some discussion that is not in the printed notes, and the printed notes will fill in more details - I suggest you use both resources.

Lecture 1 - Introduction & Radiative balance
Lecture 2 - Two-stream approximation
Lecture 3 - Runaway greenhouse effect
Lecture 4 - Ice-albedo feedback
Lecture 5 - Carbon cycle
Lecture 6 - Ocean carbon
Lecture 7 - A simple river model
Lecture 8 - St Venant equations
Lecture 9 - Surface waves & introduction to sediment transport
Lecture 10 - Bedload transport
Lecture 11 - Suspended sediment
Lecture 12 - Shallow ice approximation
Lecture 13 - Mountain glaciers
Lecture 14 - Ice sheets
Lecture 15 - Marine ice sheets
Lecture 16 - Sea ice

Office hours

I am doing office hours at 11.00 on ~~Fridays~~ Wednesdays of odd weeks - do come along. You should find the link somewhere in a channel on Teams - email me if you can't find it and I will send you it.

Problem sheets / classes

There are 4 problem sheets - each corresponds to 4 lectures - roughly one question for each lecture. I will post hand-written solutions to the problem sheets at a later date.

There is an optional problem sheet 0 which gives a taste of the sorts of maths involved with this course, and there is an optional extension problem sheet which gives some more questions to tackle and encourages trying a numerical solution of some of the models on the main problem sheets (there are some example Matlab files to help with that).

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