**Tentative program for NSF-course 17-18 June 2024**

Monday 14:00 -18:00

14:00-15:20: Introduction to TMB and RTMB

* Exercises with fixed effect models

15:20-15:40 Break, coffee

15:40-16:00 Recap of exercise

16:00-18:00: Introduction to latent variables and the Laplace approximation

* Exercise with Gaussian Markov random fields

Tuesday 09-13:00

09:-10:30: Spatial modeling

* Exercise with Gaussian Markov random fields

10:30-10:50: Break, coffee

10:50 – 11:45: Validation (OSA-residuals, simulation, jitter, Laplace checker)

* Exercise with OSA-residuals

11:45-12:10 MCMC with RTMB

12:10-12:45: Non-standard modeling

* Example with North East Arctic cod, officially used model to set quotas
* P-splines

12:45-13:00: My experience