

IWC SCIENTIFIC COMMITTEE PRE-MEETING ON MODEL BASED ABUNDANCE ESTIMATION AND TRAINING

BLED, 7-8 MAY 2017

*Convenor: Doug Butterworth
Trainers: David L Miller, Mark Bravington*

*Participants: This meeting is open to all members of the Scientific Committee; however, given the capacity of the meeting rooms, it is important to contact the convenor (doug.butterworth@uct.ac.za) before making travel arrangements and to **register** on the IWC portal (see link from <https://iwc.int/sc67a>).*

DAY 1

Morning

- Introductory talk on density surface modelling (DSM)
 - Horvitz-Thompson estimation (good, bad, ugly) (~30 mins)
 - US east coast sperm whales DSM example (model formulation, estimation, model selection, uncertainty, etc) (~1 hour+)
 - Where/when can things go wrong with spatial models? (spatial modelling is not a panacea) (~1 hour)

Afternoon

- Practical considerations (when will Horvitz-Thompson fail? When will DSM fail?)
 - What is `ltdesigntester`? How can we test our data in R? (~1 hour)
 - Show off software on 1+ IWC examples (if none in time, sperm whale east coast data from NOAA) (~1 hour)
- DSM model checking (if it's reasonable and we can fit a model, how do we know it's not terrible?) (~1 hour)

DAY 2

Morning

- Overview of things we haven't talked about (~1 hour)
 - Group size & error
 - Availability & $g(0)$
 - Covariates beyond spatial (x, y)
 - Temporal models, migration
 - Combining multi-year surveys
 - Combining platform surveys
- Workshop/practical (~1.5 hours)
 - Participants try out `ltdesigntester` with their data

Afternoon

- Future developments (~1 hour)
 - Other software/software improvements
 - Methods (stats/design) development
- What goes into IWC guidelines?