

# Schedule

Friday, 4 December 2020 14:07

- Meetings:**
- Scheduling:
    - Friday 13<sup>00</sup>-16<sup>00</sup> GMT+1 (sessions end earlier in we are done earlier, of course)
    - Weekly (see **Proposed Timeline** further down)
  - Contents:
    - We follow the material noted further down under **Group Material**
    - We prepare ourselves by working through the material noted for each session in the *Preparation Column* in **Proposed Timeline**
    - At the start of each session, either me or a volunteer quickly presents a summary of the preparation material. This does not mean a presenter should have mastered the material at all – simply be able to provide a red-thread through the contents and get a discussion going. We then go into questions/challenges concerning the material, practical examples, and personal implementations.
  - Location: Zoom @ <https://aarhusuniversity.zoom.us/j/65455334420> (meetings will be recorded to make sure everyone can stay up-to-date even if they miss one or more sessions or are unable to join on-time, or stay for the entire duration).
  - Credits: I have spoken to the management at AU and PhD students are very likely to receive study credits (ECTS) for partaking in this study group. How many, I don't know yet, but I would assume around 3-5.

**Group Material:**

- Lecture Recording "Statistical Rethinking" by Richard McElreath; available here: <https://www.youtube.com/playlist?list=PLDcUM9U54XdNM4Edgs7weivglSToZRI>
- Book "Statistical Rethinking" by Richard McElreath; available here: <https://github.com/Booleans/statistical-rethinking/blob/master/Statistical%20Rethinking%202nd%20Edition.pdf>
- Practical Examples:
  - Course Material "Statistical Rethinking": [https://github.com/rmcElreath/stat\\_rethinking\\_2020](https://github.com/rmcElreath/stat_rethinking_2020)
  - Book "Introduction to WinBUGS for Ecologists" by Marc Kéry; available here: <https://www.sciencedirect.com/book/9780123786050/introduction-to-winbugs-for-ecologists>
  - Book "Bayesian Population Analysis using WinBUGS" by Marc Kéry and Michael Schaub; available here: <https://www.sciencedirect.com/book/9780123870209/bayesian-population-analysis-using-winbugs>
- Further Input (all prospective if I can get a hold of the people):
  - Jason Matthiopoulos (<https://www.gla.ac.uk/researchinstitutes/bahcm/staff/jasonmatthiopoulos/>)
  - Joseph Chipperfield (<https://www.nina.no/english/Contact/employees/employeeinfo.aspx?AnsattID=16057>)
  - Jörn Pagel (<https://www.uni-hohenheim.de/en/organization/person/dr-joern-pagel/>)
  - Florian Hartig (<https://www.uni-regensburg.de/biologie-vorklinische-medizin/theoretische-oeekologie/mitarbeiter/hartig/>)

**Proposed Timeline:**

Date	Topic	Session Type	Preparation
11/12/20	Golem of Prague	Theoretical/Practical/Discussion	Chapter 1 in "Statistical Rethinking" Lecture 1 in "Statistical Rethinking"
18/12/20	The Basic of Bayesian Inference & Calculations	Theoretical/Practical/Discussion	Chapter 2 & 3 in "Statistical Rethinking" Lecture 2 in "Statistical Rethinking"
25/12/20 & 01/01/20	Holiday Break		
08/01/21	Geocentric Models	Theoretical/Practical/Discussion	Chapter 4 in "Statistical Rethinking" Lecture 3 & 4 in "Statistical Rethinking"
15/01/21	Extra Practices for Geocentric Models	Practical/Discussion	Extra Material for Chapter 4 in "Statistical Rethinking"
22/01/21	The Many Variables & The Spurious Waffles	Theoretical/Practical/Discussion	Chapter 5 in "Statistical Rethinking" Lecture 5 in "Statistical Rethinking"
29/01/21	The Haunted DAG & The Causal Terror	Theoretical/Practical/Discussion	Chapter 6 in "Statistical Rethinking" Lecture 6 in "Statistical Rethinking"
05/02/21	Ulysses' Compass	Theoretical/Practical/Discussion	Chapter 7 in "Statistical Rethinking" Lecture 7 & 8 in "Statistical Rethinking"
12/02/21	"Bayesian Model & Residual Checks"	Input Talk by <a href="#">Florian Hartig</a>	
19/02/21	Conditional Manatees	Theoretical/Practical/Discussion	Chapter 8 in "Statistical Rethinking" Lecture 9 in "Statistical Rethinking"
26/02/21	Markov Chain Monte Carlo	Theoretical/Practical/Discussion	Chapter 9 in "Statistical Rethinking" Lecture 10 in "Statistical Rethinking"
05/03/21	Big Entropy and the Generalized Linear Model	Theoretical/Practical/Discussion	Chapter 10 in "Statistical Rethinking" Lecture 11 in "Statistical Rethinking"
12/03/21	Hierarchical Models	Input Talk by <a href="#">Jörn Pagel</a>	
19/03/21	God Spiked the Integers	Theoretical/Practical/Discussion	Chapter 11 in "Statistical Rethinking" Lecture 12 & 13 (first half) in "Statistical Rethinking"
26/03/21	Monsters and Mixtures	Theoretical/Practical/Discussion	Chapter 12 in "Statistical Rethinking" Lecture 13 (second half) & 14 in "Statistical Rethinking"
02/04/21	Easter Break		
09/04/21	Models With Memory	Theoretical/Practical/Discussion	Chapter 13 in "Statistical Rethinking" Lecture 15 & 16 in "Statistical Rethinking"
16/04/21	Adventures in Covariance	Theoretical/Practical/Discussion	Chapter 14 in "Statistical Rethinking" Lecture 17-19 in "Statistical Rethinking"
21/04/21, 16.00-18.00	TBD	Input Talk by <a href="#">Jason Matthiopoulos</a>	
30/04/21	Easter Break		
07/05/21	Missing Data and Other Opportunities	Theoretical/Practical/Discussion	Chapter 15 in "Statistical Rethinking" Lecture 20 in "Statistical Rethinking"
14/05/21	Generalized Linear Madness	Theoretical/Practical/Discussion	Chapter 16 in "Statistical Rethinking"
21/05/21	Summary	Theoretical/Practical/Discussion	Bring questions & issues as well as ideas of how you plan to use Bayesian approaches in your work going forward