

# Topics for Familias, FamLink and FamLinkX course 3<sup>rd</sup> to 5<sup>th</sup> October 2018

Programme. Venue: Copenhagen, Denmark

Final version Oct 9<sup>th</sup> 2018

- Teachers: Thore Egeland and Daniel Kling

## Contents and practical information

- The workshop provides the necessary background for relationship inference using autosomal and X-chromosomal markers. Statistical methods are introduced and the freely available softwares [Familias](#), FamLink and [FamLinkX](#) are exemplified. The open software [R](#) is introduced, and the relevance for plotting of pedigrees and estimation of haplotype frequencies is demonstrated. Linked markers will be discussed.
- Lectures will be in English.
- The participants should bring a laptop with Familias (version 3.2.4), FamLinkX (version 2.7) and R, preferably last versions, installed. FamLink (version 2) will be demonstrated. The latest versions of the software will be demonstrated.

## Day 1 (Wednesday) – Basics and Familias

09:00-10:00 – [Brief and general overview of Familias](#) (primarily for people with no experience). Thore

10:00-10:15 – Break

10:15-11:15 – [Advanced topics \(Mutation models\)](#). Thore

11:15-12:30 – [Exercises](#) 2.1-2.7, 2.15-2.16. [Solutions](#). [Input files](#).

12:30-13:30 – Lunch

13:30-14:30 – [Advanced topics](#) (Simulations, blind search, plotting). Daniel

14:30-15:00 – Break

15:00-16:00 – [Exercises](#) and cases (from Copenhagen). [Solutions](#)

End of day – Demonstration of Familias and discussion of Familias. Daniel

## Day 2 (Thursday) – X-markers and FamLinkX

09:00-10:30 – [Introduction to X-chromosomal markers, Basic of FamLinkX](#). Thore

10:30-11:00 – Break

11:00-12:00 – FamLinkX [exercises](#) 4.12-4.22, [input files](#), [solutions](#).

12:00-12:30 – Discussion

12:30-13:30 – Lunch

13:30-14:30 – [Advanced topics](#) (Creating pedigrees, mutations, advanced settings). Daniel

14:30-15:00 – Break

15:00-16:00 – [Exercises](#) and cases (from Copenhagen). [Solutions](#)

End of day – Demonstration of FamLinkX and discussion of cases. Daniel

### **Day 3 (Friday) – Linked markers and FamLink**

09:00-10:00 – [Linked markers](#). Thore

10:00-10:15 – Break

10:15-12:00 – [FamLink](#). Daniel

12:00-12:30 – Discussion

12:30-13:30 – Lunch