

# Kinship statistics using Familias and FamLink

[ISFG, Prague](#) Sep 10 2019

Teachers: Thore Egeland and Daniel Kling

Programme. Date and venue: Sep 10 2019, Prague, Czech Republic, Prague Conference Center

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## Contents and practical information

The workshop provides the necessary background for relationship inference using autosomal markers. Statistical methods are introduced and the likelihood ratio based approach is emphasized. Models for linked markers are discussed and their relevance for recent forensic applications are illustrated. The freely available softwares Familias and FamLink are exemplified. The former software is restricted to unlinked autosomal markers. However the functionality goes beyond standard kinship problems and includes modules for simulation, disaster victim identification and familial searching. The program FamLink has recently been extended to deal with any number of linked markers (STR-s or SNP-s). The open software R is introduced, and the relevance for plotting of pedigrees and estimation of haplotype frequencies is demonstrated.

## Preparation

The participants should bring a laptop with the latest versions of the mentioned software installed, Familias 3.2.7 or later, from <https://familias.no/english/download/> and FamLink 2 (Beta) from [https://famlink.se/f\\_download.html](https://famlink.se/f_download.html). We also recommend participants to install R from <https://cran.r-project.org/bin/windows/base/> (optional). Furthermore, please download the material to be used for exercises: [Exercises](#), [Solutions](#) and input files linked below. The presentation [Genetical and statistical background](#) provides a general background and can be read prior to the workshop. There is no need to print anything as paper copies of essential lecture notes and exercises will be provided.

## Schedule

09:00 - 10:00 [Brief and general overview of methods and Familias \(pp 1-20\)](#) (Thore)

10:00 - 10:30 Coffee break

10:30 - 11:45 [Exercises](#) 2.1-2.7, 2.15-2.17, [input files ch 2](#)

11:45 - 13:00 [Advanced topics \(Simulations, blind search, plotting, DVI\)](#) (Daniel)

13:00 - 14:00 Lunch

14:00 - 14:45 [Linked markers](#) (Thore)

14:45 – 15:15 [FamLink](#) (Daniel)

15:15 - 16:00 [Exercises](#) 4.1-4.3 (FamLink 2) and 3.1-3.5 (Familias), [input files ch 3](#), (Advanced topics in Familias).  
[Additional exercises](#)

16:00 - 16:30 Coffee break

16:30 - 18:00 (Optional) Participants are invited to discuss their own cases or continue to do exercises