

ISFG Pre-congress workshop

Y-Chromosome interpretation: extended/new methodologies on Y-SNPs and Y-STRs

Tuesday September 10th 2024

Sofie Claerhout and Arwin Ralf are both millennials, their generation is also known as Generation Y. Coincidence or not, the Y played big roles in their careers as both focused on the Y-chromosome during their PhDs. Sofie and Arwin share a passion for the potential of using the haploid features of the Y-chromosome in the context of forensic genetics. Sometimes they even describe themselves as scientific siblings that each follow their own paths to tackle limitations and uncover new possibilities associated to Y-chromosome applications in forensic case work. In this workshop, they will teach you several ways how Y-SNPs and Y-STRs can be used in forensic research and case work. The focus of the workshop will be going beyond routine applications by using new markers and technologies, while also touching upon how the Y-chromosome was used in the forensic context historically. Several new tools that they have developed over the years will be showcased, including: RMplex, CSYseq, Yleaf, YMrCA, Male Pedigree Toolbox, and more. The workshop is intended for both unexperienced and experienced forensic researchers and investigators. It includes many elements of active learning by offering activities in which the participants can learn to perform several novel analyses themselves. After following this workshop, you will likely be convinced that Y-chromosome analysis deserves a larger role in forensic genetics than it currently has. You will have learned that with technological progress the narrative of the Y-chromosome as a niche application only suitable in some sexual assault cases needs to be reconsidered. You will have come to appreciate the large potential of this small, but powerful chromosome. Participants are asked to bring a laptop as there will be several practical examples on how to use new analysis tools that were developed.