

# THE 28<sup>th</sup> CONGRESS OF THE INTERNATIONAL SOCIETY FOR FORENSIC GENETICS

9 - 13<sup>th</sup> SEPTEMBER 2019, PRAGUE, CZECH REPUBLIC, PRAGUE CONGRESS CENTRE



## PRE-CONGRESS WORKSHOP

### FW1 – Interpretation of complex DNA profile mixtures using open-source software including LRmix and EuroForMix

**Organisers:** Peter Gill & Corina Benschop & Oyvind Bleka

**Type:** Full Day Workshop, Hands-on

**Date & Time:** Monday, 9 September 2019 (9:00-18:00)

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**Aim:** To provide participants with necessary skills to carry out probabilistic genotyping of complex mixtures using open-source programs to calculate the strength of evidence of complex mixtures.

**Target Group:** Law enforcement forensic experts – experienced reporting officers who deal routinely with DNA profiling evidence and are required to interpret complex mixtures in casework.

#### General Learning Outcomes:

- Understand the theory behind using likelihood ratios to interpret evidence
- Discuss the theory used to interpret complex mixtures of two or more contributors where the samples may be compromised - partial, degraded
- Describe best practice in relation to the ISFG DNA commission recommendations
- Be proficient in the use of open source software in order to carry out the calculations (LRmix Studio, EuroForMix)
- Write court going statements
- Describe the limitations of methods
- New developments will be presented, including DNAs, a new package for reporting officers
- Participants will be provided with necessary tools to carry out cascade training at a national level

#### Organisation of the course:

The course is practically orientated. The participants must bring their own laptop. Approximately one month before the course, participants will be provided with pre-course material and links that will enable them to download necessary software. Participants are encouraged to view the training videos on the EuroForMix website

#### Software:

All software are open-source and freely available for users. Free support is provided to users via help desks found on the web-sites.

LRmix studio is a commonly used qualitative program that utilises the peak designation only <http://lrmixstudio.org/>.

#### Congress Secretariat:

C-IN, Prague Congress Centre, 5. května 65, 140 21 Prague 4, Czech Republic

Tel.: +420 261 174 301, fax: +420 261 174 307

E-mail: [info@isfg2019.org](mailto:info@isfg2019.org)

[www.isfg2019.org](http://www.isfg2019.org)

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EuroForMix is a more complicated quantitative program. Its development was supported by a EU-FP7 initiative (EuroForGen-NOE). Peak height, stutter and degradation are incorporated into the model. This package is 'state of the art', and is also used for analysis of massive parallel sequencing data <http://www.euroformix.com/>.

DNAXs is a new program under development by the NFI. EuroForMix will be integrated into this package, along with a host of features designed to assist the reporting officer to interpret complex DNA profiles. Corina Benschop will provide feedback and demonstrate program features.

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