FULL-TIME PhD POSITION IN FORENSIC SCIENCE AT UNIVERSITY OF LAUSANNE

SCHOOL OF CRIMINAL JUSTICE, THE UNIVERSITY OF LAUSANNE, SWITZERLAND

Subject areas: Forensic statistics, evidence evaluation and digitally captured signatures.

About the School: The School of Criminal Justice (www.unil.ch/esc) is affiliated with the Faculty of Law, Criminal Justice and Public Administration of the University of Lausanne (UNIL). The School dates back to the legal photography courses taught at the beginning of the 20th century by Professor Archibald Rodolphe Reiss. It was the world's first academic Forensic Science School and has, today, a longstanding international reputation of xcellence for research in forensic science. It offers complete academic education and training in forensic science (at BSc, MSc and PhD level) and is particularly committed to recruiting outstanding PhD researchers.

PhD Position Summary: The School of Criminal Justice is seeking an aspiring young scientist to start a PhD research project on probabilistic evaluation and interpretation of comparative signatures examinations (digitally captured signatures). A Swiss National Science Foundation (SNSF) Grant funds this PhD project during a period of 48 months.

Project Summary: The primary objective of this SNSF funded research is focused on statistical analysis of multivariate data with complex dependence structure. Data will be acquired on digitally captured signatures. They allow one to collect either static or dynamic features (e.g. signature duration, pressure intensity, time spent with pen lifted,) that are still largely unexploited because of a lack of data acquisition and their complex structure. The purpose is to provide further theoretical grounds for operational methods (in particular for the analysis of new, original and relevant features from signatures) and to formulate a probabilistic approach to features evaluation following forensic international guidelines asking for the computation of a Bayes' factor to assess the value of evidence. The probabilistic approach has the potential to become part of resources that forensic experts need to substantiate probabilistic evaluations and conclusions in cases involving the results of comparative digitally captured signature examinations.
The appointed PhD candidate in this project will work closely with practising forensic handwriting examiners and conduct both fundamental research on probabilistic interpretation in the context of forensic signature examination and in-depth case studies.

Required Qualifications: Applicants must have a strong background in science, preferably statistics or forensic science, with an emphasis on Bayesian inference and data analysis. Knowledge and experience in graphical probability models (i.e. Bayesian networks) and practical skills with the R computer language are highly welcomed and would be a real advantage. The candidate is expected to show ability to work independently and effectively on a structured schedule in order to meet deadlines and produce the project deliveries in time. Good communication skills (written and oral) and proficiency in English will be additional assets.

Work Location: This PhD project is hosted at UNIL's School of Criminal Justice, located at Lausanne-Dorigny, and is supervised by Prof. Franco Taroni (PhD advisor). The successful applicant will meet a stimulating and exciting research environment where many other PhD students in different domains pursue their research projects. The PhD candidate will closely work in collaboration with a senior researcher in statistics (also funded by the Swiss National Science Foundation) and an international advisor (Prof. Colin Aitken, The University of Edinburgh). The applicant will also have the opportunity to participate in the School's unique doctoral program (http://www.unil.ch/esc/doctoral-program) that brings together PhD students of UNIL as well as any PhD student from another university delivering a PhD in forensic science or criminology.

How to apply and further information: Applicants should electronically submit (in a single PDF) a cover letter, curriculum vitae and one reference letter to Prof. Franco Taroni (franco.taroni@unil.ch).

Deadline for applications is January 14th 2022. The earliest starting date is April 2022. For inquiries and e-mail correspondence please write to franco.taroni@unil.ch. The salary for this full-time position, including social security contributions, follows standard SNSF and UNIL regulations (CHF 47'040/EUR 39'000 first year, excl. social security contributions).