PhD position (M/F) in the EU HORIZON 2020 MSCA-ITN TReSPAsS-ETN
(Reference: SN_MT_PhD_privacy-preserving-biometrics_022020)

Title Cryptographic primitives for GDPR compliance

Department Digital Security

Publication date 02/2020

Start date 1st June 2020

Duration Duration of the thesis

Description
In order to comply with the General Data Protection Regulation (GDPR), biometric operations should be performed without disclosing any sensitive information. Homomorphic encryption and secure multi-party computation can be considered as the main cryptographic tools for the design of novel primitives as they allow some functions to be evaluated by one or multiple parties without discovering any information than what is needed. The integration of these tools, while delivering privacy protection, may impact on systems’ operation/performance. Some complex operations cannot be supported by existing practical tools and therefore may need to be approximated by simpler operations. It is critical, however, that these approximations do not degrade security. The PhD programme will research privacy preserving biometric identification and authentication primitives by leveraging such advanced cryptographic techniques, while minimizing computational, memory and bandwidth costs and accuracy degradation.

Eligibility
Please, visit the recruitment page at https://www.trespass-etn.eu/recruitment.html for MSCA-ITN eligibility rules.

Requirements
The successful candidate will have a Master’s degree in engineering, mathematics, computing, physics or a related relevant discipline. You will have strong mathematical, programming and communication skills and be highly motivated to undertake challenging research. Good English language speaking and writing skills are essential. Knowledge of French is not required.

Application
Please, send to the email address below (i) a detailed Curriculum Vitae, (ii) a motivation letter of two pages also presenting the perspectives of research and education (iii) names and addresses of three references (preferably one from your final year project supervisor) no later than 30th April 2020.

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Thanks to its strong ties set up with the industry, EURECOM was awarded the “Institut Carnot” label jointly with the Institut Telecom right from 2006. The Carnot Label was designed to develop and professionalize cooperative research. It encourages the realization of research projects in public research centers that work together with socioeconomic actors, especially companies.

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EURECOM specifically encourages women to apply with a view towards increasing the proportion of female researchers.