

1163-68-1320 **Anamaria Costache*** (anamaria.costache@ntnu.no). *Fully Homomorphic Encryption*.

In 1978, Rivest, Adleman and Dertouzos introduce the concept of Fully Homomorphic Encryption (FHE). Dubbed as the “holy grail” of cryptography, the problem will remain unsolved for another 30 years when Gentry offered the first construction in 2009. In this talk, we will discuss FHE, its mathematical foundations and (some of) its challenges. (Received September 15, 2020)