**Description of the project:**

**Topic: Securing Network Coding Architecture Against Pollution Attacks with Band Codes.**

During a pollution attack, malicious nodes purposely transmit bogus data to the honest nodes to cripple the communication. Securing the communication requires identifying and isolating the malicious nodes. However, in Network Coding (NC) architectures, random recombination at the nodes increase the probability that honest nodes relay polluted packets. So, discriminating between honest and malicious nodes to isolate the latter turns out to be challenging at best. Band Codes (BC) are a family of rate less codes whose coding window size can be adjusted to reduce the probability that honest nodes relay polluted packets. We leverage such property to design a distributed scheme for identifying the malicious nodes in the network. Each node counts the number of times each neighbour has been involved in cases of polluted data reception and exchanges such counts with its neighbour nodes. Then, each node computes for each neighbour a discriminative honest score estimating the probability that the neighbour relays clean packets. We model such probability as a function of the BC coding window size, showing its impact on the accuracy and effectiveness of our distributed blacklisting scheme