

THE SIAM STUDENT CHAPTER OF CITY TECH  
PRESENTS A TALK BY

# Dr. Daniele Bartoli

On February 13<sup>th</sup>, 2020 IN ROOM A104 FROM 12:50-1:50 PM.

The talk is on

**“Permutation polynomials over finite fields & their application to Cryptography”**

The study of permutation polynomials over finite fields is motivated not only by their theoretical importance, but also by their remarkable applications to cryptography, combinatorial designs, and coding theory. Random permutation polynomials for a given field  $F_p$  can be easily constructed. In many applications, however, simple structures or additional extraordinary properties on permutation polynomials are usually required and the ones meeting these criteria are usually difficult to find. In this talk, I will give an overview on Permutation Polynomials. Emphasis will be given to their connections with Algebraic Geometry and Cryptography.



Dr. Daniele Bartoli hails from Molfetta, Italy. He received his Ph.D. in Mathematics and Computer Science from the University of Perugia, Italy, in 2012, with his dissertation in coding theory. He held a Marie-Curie post-doc position with the Department of Pure Mathematics and Computer Algebra at the University of Ghent, Belgium. Currently, he holds a tenure track position in the Department of Mathematics and Computer Science, University of Perugia. His research interests are in coding theory, including quantum coding, Galois geometries, and cryptography.