Codes as Knot Invariants

Altan Berdan Kiliç
Eindhoven University of Technology[1]

This talk is about constructing a bridge between algebraic coding theory and mathematical knot theory. More precisely, we show how various knot colorings give rise to family of codes, and explain the translation from the properties of knots to the parameters of their corresponding codes.

The last part of the talk is devoted to the family of alternating knots and how their codes can be used to distinguish between them.

Throughout the talk, concrete examples will be given to help with the described concepts.

Joint work with Anne Nijsten, Ruud Pellikaan and Alberto Ravagnani.

[1]Department of Mathematics and Computer Science
Eindhoven University of Technology
Netherlands
`a.b.kilic@tue.nl`