

Friday, December 8th (at 4.00pm, UK time)

Dmitry Zakharov (Central Michigan University)

Title: Vector bundles on metric graphs.

ABSTRACT

A metric graph is the tropical analogue of a Riemann surface. There is a well-developed theory of line bundles and divisors on metric graphs, which is completely analogous to the algebraic theory.

In my talk, I will define vector bundles on metric graphs and prove analogues of a number of algebraic results, such as Grothendieck's classification of vector bundles on the projective line, Atiyah's classification of vector bundles on elliptic curves, the Weil—Riemann—Roch theorem, and the Narasimhan—Seshadri correspondence.

I will also discuss bundles with other structure groups, such as the tropical orthogonal group.

Joint work with Andreas Gross, Arne Kuhrs, and Martin Ulirsch.
