Berlin Mathematical School

BMS Friday Colloquium

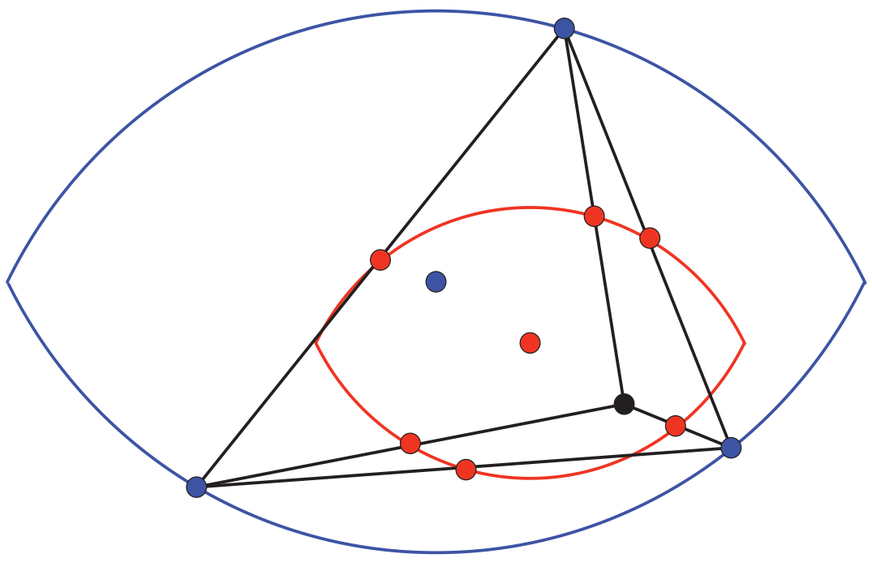
Friday 24 May 2019 at 14:15

Tea & Cookies starting at 13:00

BMS Loft, Urania, An der Urania 17, 10787 Berlin

Horst Martini

(TU Chemnitz)



In strictly convex normed planes, the nine-point (or Feuerbach) circle remains as a six-point circle.

Minkowski geometry from the discrete point of view

A Minkowski space is a finite dimensional real Banach space whose unit ball is a convex body centered at the origin. The geometry of such spaces, simply called Minkowski geometry, is a field between Banach space theory (restriction to finite dimensions), classical convexity (in view of the studied objects and used methods), Finsler geometry (showing its "local situation") and some other disciplines. Thanks to H. Minkowski who presented its axioms, this field is about one hundred years old, and it has been (re-)vitalized in recent decades, mainly by methods from and applications in discrete, combinatorial and computational geometry, optimization (e.g., location science), foundations of non-Euclidean geometries, differential geometry, and various further fields. In his talk, Martini will present a survey of recent results in the spirit of discrete geometry in Minkowski spaces, demonstrating typical methods and problems occurring there. Also results on generalized Minkowski spaces (in which the unit ball need not be centered at the origin) will be mentioned.

The picture shows the six-point analogue of the nine-point (or Feuerbach) circle in a Minkowski plane.

Horst Martini is a professor of geometry at the Technische Universität Chemnitz. His research interests include convexity, discrete and combinatorial geometry, and classical geometry. Martini completed his PhD at PH Dresden in 1984, and did his habilitation at Schiller University in Jena in 1988. He has been a full professor at the TU Chemnitz since 1993, and in 2015 he was awarded an honorary professorship by Harbin University of Science and Technology, China. Martini is editor-in-chief of "Beiträge zur Algebra und Geometrie".

www.math-berlin.de