

Dynamic and Intelligent Geometry Software

Predrag Janičić

Abstract

Within this mini-course we will present several software tools for geometry. We will discuss dynamic geometry software and give a tutorial on the GCLC tool, with an emphasis on the built-in geometry theorem provers. We will describe all algorithms for automated theorem proving in constructive geometry implemented within GCLC. We will discuss formal theorem proving and tools like the Isabelle proof checking system. Formalisation of Euclidean geometry made within this system will be given as a case study. Also, a repository of geometrical theorems, GeoThms will be presented.