Миникурс лаборатории Чебышева

Tamara Mchedlidze (Karlsruhe Institute of Technology)

Algorithms for Graph Visualization

аудитория 301 (14-я линия В. О. 29)
ср. 4 декабря, 17:15-18:45;
пт. 6 декабря, 17:15-18:45

Graph is an abstract model representing a set of objects and pairwise relations between them. Graph visualization is a geometric representation of a graph in 2 or 3 dimensions. Graph visualization is a key tool that supports investigation of the relations between the objects, understanding graph's structure and properties, and communication of the information contained in the graph. Graph visualization finds numerous applications: social networks, software engineering (object-oriented class hierarchies), decision support systems (PERT networks), VLSI (circuit schematics), biology (evolutionary trees, protein networks) and even humanities (networks of characters in a story, networks of textual variation). In this course we will talk about algorithms for generation of graph visualizations. First, we will lay down the foundations of the graph visualization algorithms and present the framework that allows to study graph visualization problems formally. Second, we will discuss a simple algorithm for tree visualization. Third, we will shortly discuss how to construct so-called orthogonal drawings, where edges are represented by polylines comprised by vertical and horizontal segments only. Finally, we will concentrate on planar graphs and prove that every planar graph has a planar straight-line drawing.

Приглашаются все желающие!