Faithful Graph Drawing

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Abstract

Graph drawing aims to compute good geometric representations of graphs in two or three dimensions. It has wide applications in network visualisation, such as social networks and biological networks, arising from many other disciplines.

This talk will review fundamental theoretical results as well as recent advances in graph drawing, including symmetric graph drawing, generalisation of the Tutte's barycenter theorem, Steinitz's theorem, and Fáry's theorem, and the so-called *beyond planar* graphs such as k-planar graphs.

I will conclude my talk with recent progress in visualization of big complex graphs, including sublinear-time graph drawing algorithms and *faithful* graph drawing.

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Keywords and phrases Graph drawing, Planar graphs, Beyond planar graphs, Tutte's barycenter theorem, Steinitz's theorem, Fáry's theorem, Sublinear-time graph drawing algorithm, Faithful graph drawing, Symmetric graph drawing

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