

Some ways of computing with graphs

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Despite the tendency of mathematicians to present only finished, elegant results, experiment has always been an important part of mathematical discovery, serving either to lead towards new constructions or to refute ill-posed conjectures. The talk will discuss some ways of computing with graphs from the speaker's personal experience. We will see, for example, how to filter out walk-regular graphs during the nauty's generating process, various ways to process sets of graphs in g6 format in java, as well as how to speed up the recently proposed method for reinforcement learning on graphs by combining python's machine learning capabilities with java's speed. Particular focus will be put on published conjectures for which counterexamples have been found along the way...