

1165-05-305

John Urschel* (urschel@mit.edu). *Stress Minimization for Low Diameter Graphs.*

Force-directed layouts are a class of techniques for drawing a graph in a low-dimensional Euclidean space. In this talk, we review some of the major force-directed algorithms, such as Tutte's spring embedding theorem, the Kamada-Kawai algorithm, and the much more recent UMAP algorithm. In addition, we focus specifically on the stress objective function and consider both algorithmic lower bounds and approximation algorithms for this optimization problem. (Received January 19, 2021)