

## **SOME PROPERTIES AND ALGORITHMS FOR VERY LARGE GRAPHS**

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This talk will explore properties and algorithms pertaining to very large graphs. These graphs serve as models for a multitude of complex systems, showcasing traits like robustness, randomness, dynamics, and distinctiveness, while also sharing essential commonalities. Understanding these graphs' fundamental characteristics, including low global density but high local density, degree distribution, low diameter, and clustering coefficient, is vital for analyzing complex system behavior. Complex systems research also addresses critical aspects such as partitioning populations into communities with shared behaviors and interests. The presentation will delve into the modeling of large graphs and discuss algorithms focused on community detection within them.