

# Measuring the closeness to mixed Moore graphs

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## Abstract

Moore graphs are extremal graphs that appear as solutions of a combinatorial problem known as the degree/diameter problem. This problem is key to the design of topologies for interconnection networks and other questions related to data structures and cryptographic protocols.

The relationship between vertices or nodes in communication networks can be undirected or directed depending on whether the communication between nodes is two-way or only one-way. Mixed graphs arise in this case and it is therefore natural to consider network topologies based on mixed graphs, and investigate the corresponding degree/diameter problem and their solutions (mixed Moore graphs).

In this talk we present mixed radial Moore graphs as an approximation of mixed Moore graphs and we describe how to measure their closeness to the properties that a mixed Moore graph should have.

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