

## Model-checking in multilayer graphs

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Real-world networks often involve qualitatively different types of relationships between different objects: for example, in order to understand a social network, we can consider both online and face-to-face contact. Many computational questions we might want to answer about such systems are intractable unless we have some additional information about the structure. The different layers typically have different structural properties (for example, face-to-face contact will be much more influenced by geography than online contact) and this talk will address the following question: when can we make use of algorithmically useful structure in the individual layers to solve problems efficiently on the whole system?