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Forbidden Subgraphs in Oriented Line Graphs.

Kotani and Sunada introduced the oriented line graph as a tool in the study of the Ihara zeta function of a finite graph. The spectral properties of the adjacency operator on the oriented line graph can be linked to the Ramanujan condition of the graph. In this talk, a reverse construction is given, to find the original graph from which an oriented line graph arises. This construction gives rise to three families of graphs which cannot occur as a subgraph of an oriented line graph. (Received September 21, 2009)