

*Department of Mathematics,
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Zoom for Thought

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Cliques, Covers, Cycles, and Salesmen: Reducing Hard Problems to Harder Ones

Abstract:

The traveling salesman problem is one of the best-known examples of an algorithmically hard problem, but what does that mean formally? It turns out that a solution to this problem would immediately give a solution to any other NP problem, and in this sense we say it is "NP-complete." In this talk, we will give more formal definition of what it means for a problem to be NP-complete, develop the machinery needed to prove NP-completeness, and then use this machinery to prove that the traveling salesman problem (and a few others) is indeed NP-complete.

January 5, 2022

2:00 PM

**Please see email with subject "Grad Student Seminar
Information."**
