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On P vs. NP, geometric complexity theory, explicit proofs and the complexity barrier

This series of two talks will give an overview of geometric complexity theory (GCT), an approach to the P vs. NP and related problems through algebraic geometry and representation theory. No background in algebraic geometry or representation theory will be assumed.

An earlier talk on 8th in the cs. dept., Univ. of Toronto, will give an overview of an early concrete lower bound of GCT, called the $P \neq NC$ result without bit operations, which was the begining of this approach. The two talks in the fields institute will be independent of this talk. But some may be interested in this earlier talk as well.

References (available at the speaker home page):

1) On P vs NP, GCT, explicit proofs and the complexity barier.
2) On P vs. NP, GCT, and the Riemann hypothesis.
3) GCT1 to GCT8:
GCT1 to 4: joint with Milind Sohoni.
GCT5: joint with Hari Narayanan