

# Categorification of Quantum Groups

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Crane and Frenkel proposed that 4-dimensional TQFTs could be obtained by categorifying quantum groups at root of unity using their canonical bases. In my talk I will explain how the quantum enveloping algebra of quantum  $sl(2)$  at generic  $q$  can be categorified using a diagrammatic calculus. If time permits I will also explain joint work with Mikhail Khovanov on how this construction can be generalized to quantum  $sl(n)$ . No background on quantum groups will be assumed.

1:00 p.m.  
Math 520  
Columbia University