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**Emily Peters\*** ([eep@math.berkeley.edu](mailto:eep@math.berkeley.edu)), Department of Mathematics, University of California, Berkeley, 970 Evans Hall, Berkeley, CA 94720. *Constructing the Haagerup subfactor with planar algebras*. Preliminary report.

Planar algebras capture the rich structure of the tower of relative commutants, which is the main invariant of a subfactor. The reverse also works: planar algebras can be used to construct subfactors. In this talk I will discuss extracting information about a subfactor from its planar algebra, and also how to construct a planar algebra which gives the Haagerup subfactor. This is the smallest exotic subfactor. (Received March 09, 2008)