

Algèbres non commutatives, théorie des représentations et fonctions  
spéciales  
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Non-commutative algebras, representation theory and special functions  
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### **Kauffman bracket skein algebra of a punctured surface**

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The Kauffman bracket skein algebra of a surface is at once related to the Witten-Reshetikhin-Turaev topological quantum field theory and to hyperbolic geometry. In this talk, we consider a generalization of the skein algebra due to Roger and Yang that includes arcs that go from puncture to puncture. In joint work with Han-Bom Moon, we show that the generalized skein algebra is a quantization of Penner's decorated Teichmüller space. Interestingly, our proof relies on a connection between the skein algebra and the cluster algebras of tagged arcs due to Fomin, Shapiro, and Thurston.