BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

POSITIVITY FOR THE SKEIN ALGEBRA OF THE 4-PUNCTURE SPHERE

Pierrick Bousseau

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Dec 2, 2020, 4-5pm

Zoom link:

https://bostonu.zoom.us/j/97456419902?pwd=Vk5hdGQ0dlgwTXZkZ1hRUHM0WndqZz09

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Abstract: The skein algebra of a topological surface is constructed from knots and links in the 3-manifold obtained by taking the product of the surface with an interval. A conjecture of Dylan Thurston predicts the positivity of the structure constants of a certain linear basis of the skein algebra. I will explain a recent proof of this conjecture for the skein algebra of the 4-punctured sphere. In a slightly surprising way, this proof of a topological result relies on complex algebraic geometry, and in particular the study of algebraic curves in complex cubic surfaces.

See http://math.bu.edu/research/geom/seminar.html or contact Yu-Shen Lin (*yslin@bu.edu*) or Siu-Cheong Lau (*lau@math.bu.edu*) for more information.