An Introduction to Interwoven Braids

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We will present a novel way to approach doubly periodic biaxial weaving via braid theory. A periodic cell of such weaves can be seen as a particular tangle embedded in a thickened torus, and more specifically as the interweaving of two braids, one embedded along a standard longitude and the other one along a meridian. The entanglement of these two braids can be described by a weaving operation which occurs at the diagrammatic level, and that will be introduced in this talk.

This is joint work with Sonia Mahmoudi of Tohoku University.