

Spinors, circles, and numbers

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Thursday 28 March, 3pm, Neckers 156

Colloquium of Mathematics Department



Abstract: Spinor spaces hold representations of the orthogonal groups and "explain" the curious behavior of certain object that need to be turned twice to return to the initial state. Quite intriguing, the same algebraic construct can be applied to configurations of circles. We shall define a "tangency spinor" and see how this concept connects various aspects of geometry, topology, and algebra. It also provides visualization of otherwise mysterious properties of quantum objects.

Keywords: Split quaternions, Stern-Brocot tree, space-time, arithmetic functions, tessellations.