

Automorphisms of type II product systems of Hilbert spaces

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In a series of ground-breaking papers, Boris Tsirelson has answered several fundamental questions on product systems posed by William Arveson. Using sophisticated probabilistic methods, he was able to construct fascinating new examples of product systems and to obtain new deep results about their structure. This lecture will give an introduction to Tsirelson's work.

Outline:

- I. Type I: Automorphisms via Brownian motion
- II. Type II via nonclassical extensions of Brownian motion; Warren's noise
- III. Nonisomorphic extensions via a toy model
- IV. The first superchaos via spectral sets
- V. Automorphisms for Warren's case
- VI. A drift sensitive extension of Brownian motion
- VII. A solution of the units equivalence problem