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Witt groups and signatures of modular tensor categories

In this talk, we introduce the notion of signatures of fusion categories. These signatures can be extended to Witt invariants of modular or super-modular categories. The higher central charges of any modular category can be expressed in terms of its first central charge and signature. The signatures of an infinite sequence of quantum group modular categories are proved to be \mathbb{Z}_2 -linearly independent, which implies a conjecture of Davydov-Nikshych-Ostrik on the super-Witt group. This talk is based on a joint work with Eric Rowell, Yilong Wang and Qing Zhang.