1022-47-127 **Konstantin A. Makarov*** (makarov@math.missouri.edu), Department of Mathematics, University of Missouri-Columbia, Columbia, MO 65211, and **Vadim Kostrykin** and **Anna Skripka**. *The Birman-Schwinger Principle in von Neumann Algebras.*

In quantum mechanics, the classical Birman-Schwinger principle states that under certain assumptions on the potential the number of bound states of the Schroedinger operator below the threshold, the Morse index, equals the number of the eigenvalues greater than 1 of the "sandwiched" resolvent of the Laplacian.

We introduce the concept of a generalized Morse index for the dissipative elements in (finite) von Neumann algebras A and obtain an analog of the Birman-Schwinger principle relating the generalized Morse indices in the context of perturbation theory for self-adjoint as well as dissipative operators in A.

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