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On the fermion number fractionization

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It is known from the late 1970s that the fermion number of a soliton may be fractional. In known examples, this number is also topological. In this talk, I describe some novel methods for calculating the fermion number and show an example (the Jackiw-Rossi model) where it is not topological. I also discuss the possibility of relating this number to spectral characteristics of effective boundary theories.