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An introduction to logarithmic conformal field theory

It is well known that conformal field theory (CFT) provides excellent models for the continuum scaling limits of many critical lattice theories and string dynamics pulled back to the worldsheet. The fact that many CFTs are exactly solvable owes much to the power of representation theory. Broadly speaking, there are two types of representation theories:

1. Those in which all representations are completely reducible.
2. All the rest.

In CFT, complete reducibility (together with a finiteness property) means that the theory is "rational". Otherwise, and this is by far the most common case, the theory is "logarithmic". In this talk, I will review some of the basic concepts of logarithmic CFT, focusing on the "non-rational" features and how we (are trying to) deal with them.