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Abstract for an Invited Paper
for the MAR12 Meeting of
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Lars Onsager Prize Lecture: A Random Walk Through Theoretical Physics

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A historical account will be given of my efforts to apply conformal field theory techniques to experimentally relevant models of condensed matter. This began with a so far unsuccessful attempt to find the exact critical exponents for the localization transition in the integer quantum Hall effect, using techniques developed by field/string theorists. It was followed by a program to classify critical behavior of Heisenberg antiferromagnetic spin chains of arbitrary spin magnitude. It eventually led to a general theory of the low energy behavior of quantum impurity models including exact solutions for non-Fermi liquid critical points.