for the first few elements of the discrete series.

Gepner and Witten[18] also explored the constraint of modular invariance in an $SU(2)$ symmetric set of conformal field theories. Gepner[19] noticed a crucial link between the modular properties of the $SU(2)$ and discrete series models enabling him to make progress in the general classification of modular invariants for both systems. Capelli, Itzykson and Zuber[20] made important further progress, allowing them to conjecture a complete solution to the modular invariance constraint. This answer was remarkable — allowed conformal field theories are indexed by the Dynkin diagrams of simply laced Lie algebras. All these models have been given lattice realizations by Pasquier[21] using Dynkin diagrams as a guide to the energetics of generalizations of Andrews-Baxter-Forrester models.

Gepner and Qiu[22] made important progress in understanding modular properties by studying certain Z_n symmetric systems. Recently Capelli, Itzykson and Zuber[23] have given a proof of their conjecture.

The classification of all $c < 1$ conformal field theories is a paradigm for a good answer to a classification problem — a few fundamental assumptions lead to a complete list of all possible critical phenomena in a certain domain. This is one of the few times in physics when a really comprehensive solution to such a problem has been given.

Generalizations of this situation can be obtained by imposing extra symmetries in addition to conformal invariance. Nonabelian continuous symmetries give rise to current algebras. We[10,24] focussed on supersymmetry, a symmetry relating bosons to fermions. This symmetry was originally discovered in the context of string theory. We analyzed the unitary representations of the supersymmetric extensions of the Virasoro algebras, the Neveu-Schwarz and Ramond algebras, and found a very similar pattern, a discrete series followed by a continuum. Remarkably, the first two elements in the super discrete series overlapped the ordinary Virasoro discrete series. The tricritical Ising model and also the ordinary gaussian model at a certain radius are supersymmetric. Physical real-