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Analytic Critical Exponents at Strong Coupling ANTHONY HEGG, Shanghai Jiao Tong University — A nonperturbative field theoretic method of generating renormalization group equations as applied to quartic strong coupling interactions is explored. Specifically, the correlation exponent and the anomalous dimension in the vicinity of a critical point are calculated via an expansion about the system size of a large but finite system. The results are analytic values which are compared to experiments via the usual scaling laws.

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