Book Review: *Coherent Anomaly Method*

Coherent Anomaly Method. M. Suzuki, World Scientific, Singapore, 1995.

This 500-page volume begins with a readable 90-page account of the coherent anomaly method, and then reprints 33 key papers on the subject. Its editor is the inventor, and indeed the main driving force, behind most of the articles reprinted.

For the uninitiated, the coherent anomaly method is an approach developed a decade ago which takes the opposite philosophy to that behind the renormalization group. Instead of integrating out the short range fluctuations by successive scale transformations, it makes successive improvements in the treatment of the short-range fluctuations, introducing a self-consistency field (mean field) to express the effect of long-range correlations. Its development is based on Suzuki's observation of the systematic improvement that one obtains in critical properties if one passes from, say, the mean-field approximation to the Bethe approximation.

This general idea is applied successfully to treat classical systems exemplified by spin glasses, percolation, self-avoiding random walks, and diffusion limited aggregation as well as selected quantum systems. The student can learn a great deal not only from the 90-page review by Suzuki himself, but also by studying the original reprinted sources.

If this reviewer has a single regret, it is that the publishers choose to charge $97 for a book that is basically camera-ready.

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