**A Student’s Guide to the Ising Model**

By

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**Coding Examples**

The coding examples given here present computer programs behind many of the figures and calculations in *A Student’s Guide to the Ising Model*. These examples are designed to improve your understanding of the physics of the Ising model by providing a hands-on implementation of the important results in the book.

The code is written in *Mathematica*, though it can be converted to other languages with little modification. No attempt has been made to produce programs that are as compact or elegant as possible—quite the opposite. The code is presented in a straightforward, simple form that makes the physics as transparent as possible, and also makes it easier to translate examples to other languages, if necessary.

Each of the examples is self-contained, and can be run on its own with no input needed from other sources. Some of the examples contain animated figures in addition to the figures found in the book itself. These animations literally put a figure “in motion” as a parameter is varied. As a result, they give an almost visceral feeling for the physics of the Ising model, in a way that simply isn’t possible on the printed pages of a physical book.

So, sit back, relax, fire up the computer, and enjoy working through all of the key results of *A Student’s Guide to the Ising Model*. I think you’ll have fun producing the plots and tables in the book for yourself, as well as changing things to generate entirely new results of your own.