

practical. About 300 pages cover the phenomenology of supersymmetry—from colliders to dark matter—with significant discussion of supersymmetry breaking and a 30-page chapter on supersymmetric Higgs bosons. The book begins with a good pedagogical treatment of the superspace formalism and ends with an extensive summary of Feynman rules. Both *Theory and Phenomenology of Sparticles* and *Weak Scale Supersymmetry* emphasize the minimal supersymmetric SM, an extension of the SM that gives every SM particle a superpartner but adds no new forces. If supersymmetry were not a broken symmetry, the MSSM would add no new parameters to the SM.

Terning's *Modern Supersymmetry* is quite different. The monograph begins with a good overview of Lagrangians and the MSSM. The book's main focus is on supersymmetric, relativistic quantum field theories, with good pedagogical treatments of nonperturbative results. It contains helpful discussions of the importance of holomorphy, exact solutions, Seiberg duality, and Witten–Seiberg theory, with considerable attention to formal ways of breaking supersymmetry. Baer and Tata and Drees, Godbole, and Roy offer nice in-

troductory treatments of the important subject of nonrenormalization theorems via the Wess–Zumino model, while Terning presents a modern, general derivation in a strong chapter on the power of holomorphy.

If superpartners are indeed discovered at the Tevatron or Large Hadron Collider, these books will provide valuable help and tools in interpreting the data and in understanding the implications of the discoveries. The SM provides a description of how the world works; supersymmetry, so compelling to many particle physicists, could begin to teach us why the world is the way it is. Having good books on hand will make such insights easier to develop and more accessible.

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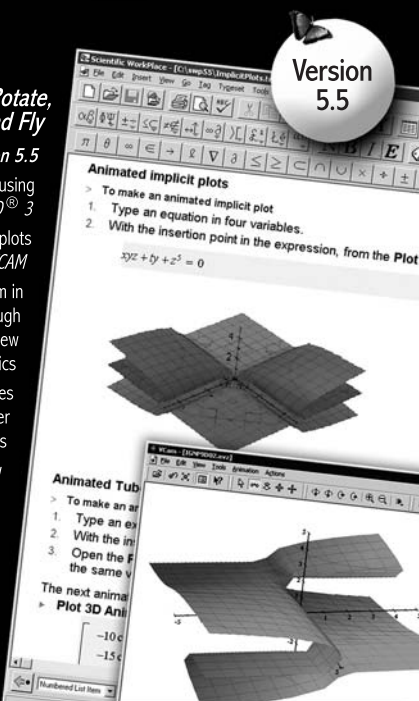
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