

capacity for self-organization built into their rules, develop into a pattern of bigger and bigger globs.

Durrett is interested in formulating techniques for obtaining useful quantitative information about a model's critical values and survival properties. He hopes to achieve this by using a judicious blend of rigorous proof and computer simulation. "When that's done," he says, "you'll find that these models will have a wider application." So far, most models are not complicated enough to be taken seriously as stand-ins for natural processes.

One of Durrett's current projects concerns the effect of using a mixture of rules on a single grid. In other words, the rule that applies for one cell may not be the same as the rule that applies for a neighbor. In ecological terms, that situation could correspond to an environment in which, say, desert and forest patches occur side by side.

"Many of these problems can be explained in a few minutes to a person with no prior experience in the area," says Durrett. "That's what I find is one of the charms of the area. It's not something that you have to spend three years in graduate school to appreciate. And it's easy to play around with these things on a computer." □

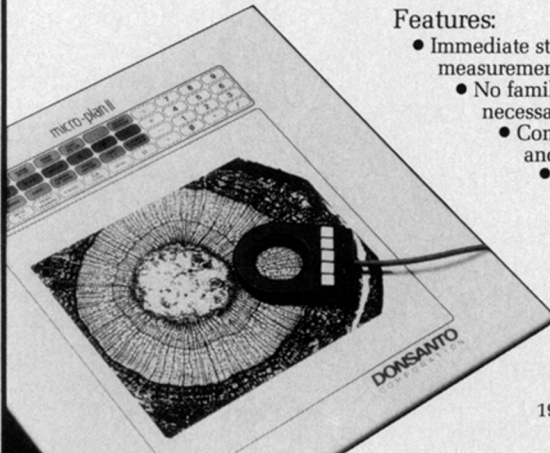
# micro-plan II

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**Einstein's Legacy: The Unity of Space and Time** — Julian Schwinger. A Nobel laureate recounts Einstein's quest for the reconciliation of Newton's theories of space and time and Maxwell's theories of electricity, magnetism and light, which led to the unification of matter and energy and of space and time in Einstein's special and general theories of relativity. The scientific developments are blended here with accounts of the human side of the story. Describes past experimental tests of Einstein's theories as well as current space-age experiments intended to further confirm or perhaps challenge Einstein's theories. Sci Am Bks (W H Freeman), 1987, 250 p., color/b&w illus., \$32.95.

**A Field Guide to Hawks of North America** — William S. Clark. Field identification of hawks and other diurnal raptors, including eagles, falcons and kites, is difficult, according to the author, partly because they are wary and difficult to approach and partly because they exhibit a variety of plumage and alter their shape with different flight modes. This well-illustrated guide presents the latest in field marks and behavior characteristics by which the 33 native and six accidental North American hawks may be more easily identified. HM, Peterson Field Guide Series, 1987, 198 p., color/b&w illus. by Brian K. Wheeler, paper, \$13.95.

**A Field Guide to Mushrooms of North America** — Kent H. McKnight and Vera B. McKnight. This beautifully illustrated guide includes most of the common edible and poisonous species found in North America, along with many others that are of interest. Focuses primarily on identifying characteristics that can be observed with the specimen in hand rather than under a microscope. HM, Peterson Field Guide Series, 1987, 429 p., color/b&w illus., paper, \$13.95.

**In Search of the Double Helix: Quantum Physics and Life** — John Gribbin. A readable account of evolution as it unfolds from Darwin to the modeling of DNA as a double helix. Describes how physics and chemistry have contributed to the emergence of molecular biology. Goes on to bring the story up to the present as scientists continue to search for the origins of life. Originally published in hardback by McGraw-Hill in 1985. Bantam, 1987, 369 p., illus., paper, \$8.95.

**The Media Lab: Inventing the Future at MIT** — Stewart Brand. The Media Laboratory at MIT, a unique interdisciplinary center, is based on its director's conviction that the whole gamut of communications media — television, books, telephones, recordings, newspapers, magazines and film — is being transformed by computers. The lab is concerned with electronic communication technologies and, according to the preface, how humans connect, how they are connecting faster and wider with new technology and how they might connect better. Much of the book is a tour of some of the lab's research, and the rest is concerned with "the media lab of the world," discussing how the new communications technologies will affect the world. Viking Pr, 1987, 285 p., color/b&w illus., \$20.

**Prehistoric Britain** — Timothy Darvill. Archaeological evidence is used here to examine the development of human societies in Britain from earliest times to the Roman conquest. This well-illustrated book emphasizes six themes: subsistence, technology, ritual, trade, society and population. Yale U Pr, 1987, 223 p., illus., \$25.

**The Psychology of Happiness** — Michael Argyle. Relationships, work and leisure, the author found, are major sources of human happiness. Here, he presents research findings in this field and discusses these sources, along with the effects of wealth, social class, sex, age and health on happiness. Methods for enhancing happiness are described. Methuen Inc, 1987, 256 p., charts & graphs, \$47.50, paper, \$14.95.