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Are You Set up for Symbolics?

Lewis M. Holmes



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From the Editor

Are you set up for symbolics?

This issue features an overview article on symbolic math software—also known as computer algebra. Other coverage in the issue expands on particular aspects of this subject. Also receiving attention are the World Wide Web and the popular browser known as MOSAIC.

Computer algebra

Steven M. Christensen has supplied the feature article on computer algebra (see p. 308). He gives a brief history of the field, outlines the capabilities of computer-algebra systems, describes what is available (in a lengthy table), and discusses hardware needs and information sources. More information from the commercial suppliers listed in the table can be obtained through CIP Online (see p. 254).


Additional explicit discussion of symbolic math software comes in an interview with Stephen Wolfram, the physicist who developed Mathematica and heads the company that supplies it (see p. 238). Wolfram claims that he helped to revolutionize physics through his software development. He is now attempting to set a new direction for science in a book that he is writing on algorithmic structures and scientific models.

William J. Thompson offers a comparison of two of the symbolic math packages, Mathematica and Maple (see p. 269). He describes how these packages handle problems requiring a mixture of symbolics, numerics, and graphics. Joan Adler uses both these packages in work with Padé approximates in the computation of series-expansion coefficients (see p. 287).

In the peer-reviewed Journal Section, authors B. G. Adams and G. A. Artega apply Maple to large-order hydrogenic perturbation expansions (see p. 343). P. Castellví, X. Jaén, and E. Llanta have implemented basic tools of tensor and exterior calculus in the Mathematica language (see p. 360).

MOSAIC and the Web

In Internet Corner, Glenn Ricart tells how to get set up with NCSA's MOSAIC and start becoming World Wide Web-literate with the help of this browser (see p. 249). The World Wide Web, Tim Berners-Lee's brainchild, gets a review of its own in the Books Department (see p. 298).


Lewis M. Holmes
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