

Maplesoft offers new Physics PowerTools for Educators and Professionals

Free lesson plans and research tools available online for Maple users

WATERLOO, CANADA, August 26, 2003—Maplesoft has just released four new physics PowerTools™ for physics educators and professionals. Maple PowerTools are free add-on packages and academic courses developed by experts in the field to help users of the Maple® advanced mathematics system configure Maple for their teaching and research.

The new physics PowerTools include a 40-lesson plan on partial differential equations (PDEs) for undergraduate education, a 7-lesson plan on vibrations, a Feynman diagram package and an orbital package for practicing physicists.

Jim Herod, a retired professor from Georgia tech, developed the 40-lessons that make up the *Partial Differential Equations* PowerTool. “After it was decided that all the students at Georgia Tech should own a computer, I used Maple in every math class I taught,” says Herod. He adds, “I often taught calculus classes of a thousand students, with a Maple assignment due every week.”

Alexei Tikhonenko, a physicist at the Institute of Nuclear Power Engineering in Russia, contributed the *Vibrations and Oscillations* PowerTool that consists of 7 lessons on the subject. This course drills deep into this important area and thoroughly exams periodic driving forces, the effects of piecewise forces and forces of finite duration.

Marvin Weinstein, of the Stanford Linear Accelerator Center, created a new Maple package, *FeynmanGraphs*. This package provides an easy means for drawing Feynman diagrams, which describe the interactions of quantum electrodynamics. This package includes support for bosons, fermions, gluons and loops of those varieties.

Finally, David Harrison, of the University of Victoria in British Columbia, developed the Maple PowerTool, *Orbitals*. This PowerTool is a Maple package for practicing physicists. It provides physicists with the tools for deriving formulas of hydrogen and Slater-type orbitals. With the formulas in hand, physicists can easily visualize orbitals with simple plot commands.

These new physics PowerTools are available for free download from the Maple Application Web site at www.mapleapps.com.

About Maplesoft

Founded in 1988, Maplesoft is a world leader in mathematical and analytical software. Its suite

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of products include Maple 9, the standard in interactive mathematical software; MapleNet,TM a comprehensive mathematical infrastructure for the Web; and MapleTA,TM a Web-based system for automated grading of mathematics tests. Maple products embody advanced technology such as symbolic computation, infinite precision numerics, innovative Web components, extensible user-interface technology and an unrivalled suite of mathematical algorithms for intelligent management of complex mathematics. Over 5 million users benefit from advanced Maple technology. Virtually every major university and research institute in the world, including MIT, Stanford, Oxford and Waterloo, has adopted Maple products to enhance their education and research activities. Maplesoft's industrial customer base includes Boeing, Bosch, Canon and NASA. For more information visit www.maplesoft.com.

About Maple 9

MapleTM 9 delivers a comprehensive environment for visualizing and exploring mathematical concepts and developing mathematical applications. Combined with thousands of free add-on packages and applications available at the Maple Application CenterTM www.mapleapps.com, Maple 9 is the most flexible analytical tool for technical professionals and students. Features include a comprehensive suite of mathematical solvers, mathematical visualization, a powerful programming language, and a rich technical document-processing environment. New features include an enhanced user interface, new help browser, new code generators for MATLAB® and Visual Basic®, new student learning packages, an extensive addition of NAG® numerical solvers, and numerous mathematical enhancements.

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