NEW \textsc{Mathematica} 4.2

Delivers XML and Java Functionality

Wolfram Research, Inc. introduces the first technical computing system with full XML support and seamless Java \textsuperscript{\textregistered} integration. Now users can access any Java program from within Mathematica and work directly with XML data and documents. Version 4.2 also brings important advancements in linear programming, statistics, optimization, combinatorics, graph theory, and technical publishing.

The built-in Java Runtime Environment and J/Link 2.0 give developers an easy way to mix Mathematica and Java code right out of the box. Whether you want to build graphical user interfaces to Mathematica using AWT and Swing graphical user interface components or connect to your enterprise database using JDBC, you can now use Java with the same ease as the built-in Mathematica programming language.

Version 4.2 also marks the beginning of the XML era at Wolfram Research by offering support for import, export, and symbolic manipulation of XML documents and data. In conjunction with a major focus on technical publishing in this version, Mathematica now includes XML extensions that let users save notebooks and Mathematica expressions as XML constructs and adds support for XHTML and MathML 2.0, the emerging standard for mathematics on the web.

Mathematica 4.2 also includes a new \textsc{AuthorTools} package and a slide show environment that make preparing notebooks for presentations and online and print publication much easier. Mathematica 4.2 is available for Windows, Mac OS X, Linux (PC, Alpha, PowerPC), Solaris, HP-UX, IRIX, AIX, Compaq Tru64 Unix, and compatible systems.

For more information:
www.wolfram.com/products/mathematica/newin42

**MathML CENTRAL IS NOW ONLINE!**

MathML Central is Wolfram Research’s latest contribution to the MathML initiative. This website provides a wealth of tools and resources that make it easy to place MathML in your documents—whether you want to generate MathML from other notations; and how to validate, plot, and integrate MathML expressions.

Visit MathML Central: www.mathmlcentral.com

**Recent Book Releases**

\textit{A New Kind of Science} by Stephen Wolfram

\textit{Discrete Dynamical Systems and Difference Equations with Mathematica} by Robert Devaney

\textit{Mathematica for Microeconomics: Learning by Example} by John J. Kinney

\textit{Statistics for Science and Engineering} by Daren R. Bascomb

\textit{Visual Data} by Steve Wagon and Dan Schwalbe
store.wolfram.com/view/book/007966.str

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www.wolfram.com/mathwire

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CALLING ALL MATHEMATICA USERS

We have established several new services to help improve support and communication between all members of the Mathematica community.

Mathematica Speakers Assistance Program
This program offers resources for use in your Mathematica-related presentation or seminar, such as discount templates, presentation materials and handouts, presentation wear, and publicity via our website. Wolfram Research is happy to provide these resources to speakers, trainers, and consultants to help make your presentation as dynamic and informative as possible.

Visit us at: www.wolfram.com/services/training/speakers

Mathematica Author and Publisher Program
Designed to support authors and publishers of Mathematica-related books, the Mathematica Author and Publisher Program provides complimentary support, tools, and information for book publishing, marketing, and advertising. All members of the Mathematica Author and Publisher Program are automatically enrolled in and can take advantage of additional benefits offered through the Mathematica Developer Program.

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Send Us Your User Experiences!
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A NEW KIND OF SCIENCE EXPLORER

Experience the discoveries of Mathematica on your own computer

Wolfram Research has developed Mathematica, a supplemental software package for fans of the best-selling book, A New Kind of Science, written by company CEO Stephen Wolfram. A New Kind of Science Explorer is based on the very same programs that Wolfram used for his book. It allows you to experience the discoveries of the book on your own computer, repeating Wolfram’s experiments and trying your own.

A New Kind of Science Explorer includes over 450 key experiments featured in A New Kind of Science. The interactive experiments are organized according to their corresponding page number so you can easily refer between the book and the program. A New Kind of Science Explorer is ideal for personal study, recreation, or classroom use. You can use it to gain a better understanding of the book, verify results, and further explore the finer points of cellular automata and other simple programs.

In keeping with the book’s aim to be accessible to scientists and nonscientists alike, A New Kind of Science Explorer has a forms-based interface that anyone can use. Unrestrictive text inputs for manipulating fields make it possible to conduct unlimited experiments. Advanced users can analyze their graphical output even further with Mathematica.

A New Kind of Science Explorer is available for Windows and Macintosh operating systems.

For more information: www.wolframscience.com/nkss

A WOLFRAM RESEARCH BULLETIN

MATHEMATICA APPLICATIONS

Wolfram Research has a number of new and updated application packages available that help extend the functionality of your Mathematica license in a variety of specialized fields.

Digital Image Processing 1.1 provides powerful, fast image processing with Mathematica.
www.wolfram.com/products/applications/digitalimaging

A New Kind of Science Explorer provides a wealth of tools to help teachers succeed in the classroom and bring mathematics alive for their students. The unique point-and-click problem generator enables math educators to quickly and easily create original assignments, quizzes, and answer keys, while the underlying Mathematica computational engine tackles everything from simple calculator problems to advanced symbolic manipulations. The built-in courseware and classroom demos that range from prealgebra to calculus enhance students’ intuition and visualization capabilities.

Mathematica Teacher’s Edition provides a wealth of tools to help teachers succeed in the classroom and bring mathematics alive for their students. The unique point-and-click problem generator enables math educators to quickly and easily create original assignments, quizzes, and answer keys, while the underlying Mathematica computational engine tackles everything from simple calculator problems to advanced symbolic manipulations. The built-in courseware and classroom demos that range from prealgebra to calculus enhance students’ intuition and visualization capabilities.

Use Mathematica Teacher’s Edition by itself or in conjunction with Mathematica for the Classroom to give students a head start by exposing them to the computing tools and methods they will use throughout their future academic and professional careers.
For more information: www.wolfram.com/products/teachersedition

TECHtips...

You can build graphical user interfaces (GUIs) using Mathematica and Java. These basic examples show how to use J/Link to create GUIs within a Mathematica notebook.
library.wolfram.com/howtoes/jlinkgui

Features that can help you make the most of your Mathematica experience...

Mathematica 4.2 lets you easily create your own slide show presentations. From the Help Browser, search for Slide Show in the Master Index. The first link in the section, Working with Slide Shows, shows you how to use the Slide Show palette to create and navigate through slides.
document.wolfram.com/v4/OtherInformation/WorkingwithSlideShows.html

webMathematica can be used to design and serve web pages that generate output to narrowband devices including cellular phones, PDAs, and pagers. See examples illustrating webMathematica applications for mobile communication.
www.wolfram.com/products/webmathematica/users/wireless.html

When saving notebooks as HTML, you can make your typeset cells use text and not GIFs by using the option ConversionOptions. To set this as the default, use the SetOptions command:
support.wolfram.com/mathematica/interface/export/nogifs.html