

WOLFRAM RESEARCH, INC.

100 Trade Center Drive
Champaign, IL 61820-7237, USA
www.wolfram.com
info@wolfram.com

WOLFRAM RESEARCH EUROPE LTD.

10 Blenheim Office Park
Lower Road, Long Hanborough
Oxfordshire OX29 8RY
UNITED KINGDOM
www.wolfram.co.uk
info@wolfram.co.uk

WOLFRAM RESEARCH ASIA LTD.

Oak Ochanomizu Building 5F
3-8 Kanda Ogawa-machi
Chiyoda-ku, Tokyo 101-0052
JAPAN
www.wolfram.co.jp
info@wolfram.co.jp

new developments

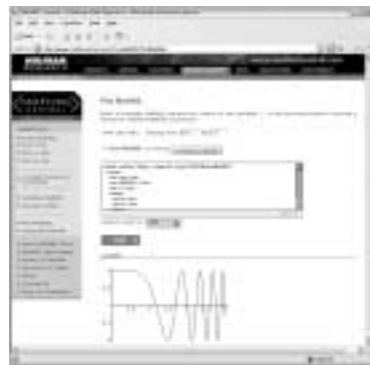
MathML Central Is Now ONLINE!

MathML Central is Wolfram Research's latest contribution to the MathML initiative. This website provides a wealth of tools and resources that make it the place to go for information about MathML, its history, and its usage. The tools on MathML Central take advantage of *Mathematica*'s built-in capabilities for importing, processing, and exporting MathML. Interactive examples demonstrate how to render text, files, and URLs in MathML; how to convert expressions to MathML from other notations; and how to validate, plot, and integrate MathML expressions.

Wolfram Research has long been an instrumental leader in the development of MathML, and is the first technical software maker to offer full MathML support and display capabilities. The open-source Mozilla browser and the new preview release of Netscape 7.0 also support MathML 2.0, and Internet Explorer can display MathML with the aid of several available plug-ins.

Visit MathML Central:

www.mathmlcentral.com



RECENT BOOK RELEASES

A New Kind of Science by Stephen Wolfram

store.wolfram.com/view/book/ISBN1579550088.str

Discrete Dynamical Systems and Difference Equations with Mathematica by Mustafa R. S. Kulenovic and Orlando Merino

store.wolfram.com/view/book/ISBN1584882875.str

Mathematica for Microeconomics: Learning by Example by John Robert Stinespring

store.wolfram.com/view/book/ISBN0126709610.str

Statistics for Science and Engineering by John J. Kinney

store.wolfram.com/view/book/ISBN0201437201.str

VisualDsolve by Stan Wagon and Dan Schwalbe

store.wolfram.com/view/book/D0706.str

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www.wolfram.com/mathwire

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NEW MATHEMATICA® 4.2

Delivers XML and Java Functionality

Key new features in *Mathematica* 4.2 include the following:

- *Transparent Java integration with J/Link 2.0 and built-in Java Runtime Environment*
- *XML extensions that allow Mathematica notebooks and expressions to be stored as XML*
- *New bundled XML tools package for symbolic XML manipulation*
- *Support for XHTML export including style sheets*
- *Extended MathML 2.0 support*
- *Improved linear programming and optimization*
- *Statistics enhancements including new ANOVA package*
- *New bundled Combinatorica package for combinatorics and graph theory*
- *New bundled AuthorTools package for technical publishing*
- *Slide show environment for presentations*
- *New import and export formats including FITS and SDTS*



Slide show environment is ideal for presentations

Wolfram Research, Inc. introduces the first technical computing system with full XML support and seamless Java™ 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.

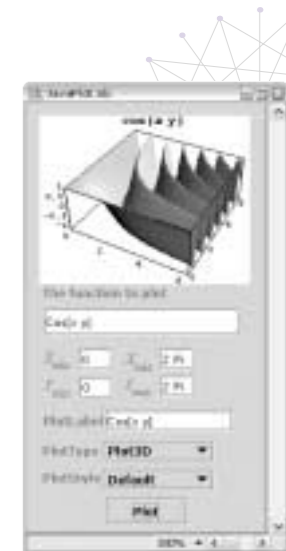
Version 4.2 also marks the beginning of the XML era at Wolfram Research by offering support for import, export, and symbolic manipulation of XML documents and data. In conjunction with a major focus on technical publishing in this version, *Mathematica* now includes XML extensions that let users save 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 *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, 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



Mathematica 4.2 offers seamless Java integration for applications such as custom user interfaces



New bundled *AuthorTools* package offers over 60 functions for technical publishing

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 document templates, promotional 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 authoring, publishing, and marketing. In addition, 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.

Visit us at: www.wolfram.com/company/programs/author

Send Us Your User Experiences!

Wolfram Research would like to know how you are using your *Mathematica* or *webMathematica* license. Submit your nonproprietary journal or conference articles, papers, web links, or other success stories to experience@wolfram.com. If we feature your work on our website, we'll send you a free *Mathematica* t-shirt!

Visit us at: www.wolfram.com/products/mathematica/experience

A NEW KIND OF SCIENCE™ EXPLORER

Experience the discoveries of A New Kind of Science on your own computer

Wolfram Research has developed *A New Kind of Science Explorer*, 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 graphic 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/nksx



- Forms-based interface; no programming required
- Organized to correspond directly to the book
- Graphical session history allows immediate recall of experiments
- Graphics can be exported in GIF, JPEG, TIFF, or EPS (graphics licensed for personal use only)
- Experimental inputs can be exchanged in convenient text format
- Data can be exported for research and analysis in *Mathematica*
- Powered by proven *Mathematica* technology



Go Back to School WITH MATHEMATICA™ TEACHER'S EDITION

Use the Problem Generator to create assignments and quizzes in minutes.

Produce answer keys with a click of a button.

Include typeset equations and graphics anywhere you choose.

Create interactive documents to share online or in print.

Generate 2D and 3D graphics and animations.

Customize individual assignments and quizzes.

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 easily 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

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 for powerful, fast image processing with *Mathematica*.
www.wolfram.com/products/applications/digitalimage

Analog Insydes 2.0 is the intelligent symbolic design system for analog circuits.
www.wolfram.com/products/applications/insydes

Global Optimization 4.2 offers functions for constrained and unconstrained nonlinear optimization.
www.wolfram.com/products/applications/globalopt

Mathematica Link for LabVIEW enables easy acquisition and analysis of measurements throughout all phases of the design process.
www.wolfram.com/products/applications/labview

MathOptimizer is an advanced modeling and optimization system for *Mathematica* users.
www.wolfram.com/products/applications/mathoptimizer

UnRisk PRICING ENGINE 1.6 is newly upgraded to bring even more speed and precision to the field of financial derivatives analysis.
www.wolfram.com/products/applications/unrisk

UnRisk STANDARD provides utilities, functions, and derivative instruments for *Mathematica* programmers in finance.
www.wolfram.com/products/applications/unriskstandard

MathEverywhere Courseware Series presents mathematics through user-active learning.
www.wolfram.com/products/applications/matheverywhere

mathStatica facilitates mathematical statistics with *Mathematica*.
www.wolfram.com/products/applications/mathstatica

MATHEMATICA 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/howtos/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.

documents.wolfram.com/v4/OtherInformation/WorkingwithSlideShows.html

webMathematica can be used to design and serve web pages that generate output to narrow-band devices including cellular phones, PDAs, and pagers. See examples illustrating *webMathematica* applications for mobile communication.

www.wolfram.com/products/webmathematica/uses/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