

The maple Reporter™

Newsletter for December 2006

Welcome to the December 2006 Issue of the Maple Reporter!

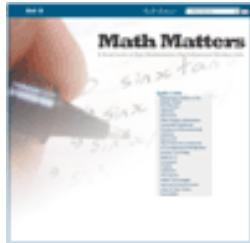
The Maple Reporter provides all the latest news from Maplesoft, with articles highlighting new products, innovative application areas, tips and techniques, events, and much more.

This month's issue features news on the release of **Atlas™** - modern differential geometry for **Maple™**, a **MapleConnect** package which allows you to solve a variety of differential geometry problems using a simple computational scheme. Other highlights include: two new user case studies, and **Math Matters in the Modern World** - a tour of the top twenty engineering achievements of the twentieth century.

To ensure delivery of Maplesoft emails to your inbox please add customerservice@maplesoft.com to your address book.

News & Announcements

Mathematics Matters in the Modern World



Take a tour on the Maplesoft Web site of the twenty engineering achievements of the twentieth century that fundamentally changed society, and the ways mathematics helps us utilize and benefit from these great technological achievements.

New User Case Studies

SkySails' Towing Kite Wind Propulsion Systems powered by Maple



Free Demo Disk



Explore Maple 10 with a Free Demo Disk

Order the Maple 10 Demo disk and explore the features that make Maple 10 the ultimate productivity tool for solving mathematical problems and creating interactive technical applications.

Maple Adoption Program™



Register Your Winter Courses Today!

SkySails GmbH & Co. KG, based in Hamburg, Germany, develops, produces, and distributes towing kite wind propulsion systems for modern means of sea travel and transportation. SkySails used Maple to develop its simulation software. Maple was chosen for its symbolic computation engine, which considerably simplifies the derivation of the equations of motion for multi body systems. Editing the three-dimensional mathematical models by hand was not feasible within the company's time frame. Many matrix operations and derivatives needed to be applied in order to set up the equations in three dimensions.

Florida's Indian River Community College used Maple T.A.™ for dramatic improvements in student learning

To raise the success level in his algebra course, Professor Asoka Peiris, Math Department Chair at Indian River Community College, Florida, made a commitment to himself: improve his students' conceptual understanding and provide tutorial practice of math problems while accommodating different learning styles. His strategy was to increase the use of technology in his classroom, and he turned to Maplesoft™. He used Maplesoft's testing and assessment product Maple T.A.™ to develop online tools that enable students to diagnose their own weaknesses in math comprehension and access practice materials at their own convenience. The students loved the new approach to learning and Professor Peiris saw dramatic improvements in the class' response.

Visit [User Case Studies](#) to read both case studies in their entirety.



New MapleConnect Product: Atlas™ - modern differential geometry for Maple™

The Atlas package is a powerful Maple toolbox which allows you to solve a variety of differential geometry problems using a simple computational scheme. The computational process is highly automated which allows you to save time by concentrating your efforts on the problem not on the programming.

New Maple Toolbox for MATLAB Product Demonstration



One of the most popular demos on the Maplesoft site, this new product demonstration illustrates the connection of Maple and MATLAB, with examples of how you can derive solutions in one, and manipulate them in the other. Maple's capabilities are also highlighted with the solution of a higher-order differential equation and a demonstration of its features that aid in the design and solution development process

Maple Books:

If you are publishing a paper or writing a book related to Maple, we can help you! Please send your comments to applications@maplesoft.com.

Events

Joint Mathematics Meeting 2007

January 5 – 8, 2007
New Orleans Marriott and Sheraton New Orleans
New Orleans, Louisiana
[Click here for details.](#)

Chautauqua Short Courses for College Teachers

June 6th - June 8th 2007
Pedagogy and Methodology of Using Maple in the Classroom
Grand Valley State University, Allendale, MI.
[Click here for details.](#)

See our [Events page](#) for other upcoming shows.

Product Tips and Techniques

[Classroom Tips and Techniques: Teaching Fourier Series with Maple](#)

Author: Robert J. Lopez, Emeritus Professor of Mathematics and Maple Fellow, Maplesoft

Maplesoft Seminar Series

Maplesoft's monthly web seminars provide an excellent opportunity for you to learn about interesting applications, new techniques, and upcoming products. Hosted live by senior Maplesoft product experts, these 1 hour interactive sessions offer the opportunity to ask questions and interact with the presenter. Whether you are a seasoned Maple user, or someone looking to find out what Maple is all about, this seminar series will offer an opportunity to learn something new and interesting.

- + **December 5th, 2006**, 2:00 - 3:00 pm EST - [Maplesoft-MAA Placement Test Suite](#)
- + **December 6th, 2006**, 2:00 - 4:00 pm EST - [Modeling and Simulating Multibody Mechanical Systems Using DynaFlexPro and BlockBuilder for Simulink](#)
- + **December 7th, 2006**, 2:00 - 3:00 pm EST - [Maplesoft Solutions for Engineering Research and Education](#)
- + **December 12th, 2006**, 9:00 - 10:00 am EST - [Maple Toolbox for MATLAB](#)
- + **December 13th, 2006**, 2:00 - 3:00 pm EST - [Mathematical Survival Kit](#)
- + **December 14th, 2006**, 2:00 - 3:00 pm EST - [Clickable Calculus: Syntax-Free Maple for the Calculus Student](#)
- + **December 18th, 2006**, 2:00 - 3:00 pm EST - [Introduction to Maple 10](#)

Missed a seminar? Check out our [recorded seminar section](#) where you can browse and view recordings of past seminars.

MaplePrimes

[MaplePrimes](#) is a great place to find tips on how to make your Maple documents look their best. Whether you want to [round small numbers to zero](#), or use your preferred [Matrix notation](#), MaplePrimes has the answers you are looking for. No question is too small or too complicated to ask on MaplePrimes. Even the most difficult questions are answered within hours of being asked. Come over to [MaplePrimes](#), and see how the community can help you.

Application Center Highlights

The Maple Application Center has received the following new applications over the last month:

English

- [Functional Approximation Through Finite Fourier Series](#)

Prof. David Macias Ferrer

- [Fractal Volumes](#)

Prof. Wieslaw Kotarski

- [Complex Analysis Project](#)

Dr. John Mathews

- [Polynomial Regression through Least Square Method](#)

Prof. David Macias Ferrer

- [Decomposition Into Irreducible Factors in the Gauss Integers Annulus](#)

Prof. Samir KADDOURI

- [Solving Differential Equations using Laplace Transforms](#)

Prof. Carl Madigan

- [Global and Nonsmooth Optimization Toolbox](#)

Centre for Informatics and Applied Optimization CIAO

French

- [Générateur de Figures Géométriques](#)

Mr. Alain Le_Stang

- [La Fibre Optique Multimode à Gradient d'Indice](#)

Prof. EL MAHDI ASSAID

Maplesoft in the Press

Here are some highlights of this past months press coverage.

[Maple-NAG Connector Seeks To Eliminate Conventional Programming Issues](#)

Financial Engineering News, November 2006

Janice Rosenberg of Financial Engineering News looks at the developing relationship between Maplesoft and NAG (Numerical Algorithms Group) and discusses the companies' joint product, the Maple-NAG Connector.

"This fall NAG (Numerical Algorithms Group), maker of mathematical and statistical components, and Maplesoft, a developer of desktop mathematical software in Waterloo, Ontario, launched the Maple-NAG Connector, an outgrowth of the two companies' eight-year partnership. The product was created in a direct collaboration between the companies' research and development teams."

[DynaFlexPro: Simulate Tire Forces](#)

Machine Design, November 2006

"DynaFlexPro/Tire is an optional module to DynaFlexPro for modeling and simulating dynamics of complex mechanical multibody systems. The module lets engineers use pneumatic tire models in simulating vehicle systems. The software derives kinematic quantities, such as slip angle, longitudinal slip, and inclination angle, as optimized computational sequences."

[Help Students Brush Up on Algebra](#)

University Business, November 2006

"Maplesoft has converted The Mathematics Survival Kit book into an interactive electronic format, covering 115 topics from algebra to integral calculus. The text is written in a conversational manner with 10-minute refreshers, exercises that provide hints to achieve the correct answer, and a "more to explore" section with hundreds of questions and assessments students can use to reinforce concepts."

Mathematics Survival Kit

District Administration, November 2006

"The book of the same name is presented in electronic format covering 115 topics from algebra to integral calculus. The text is written in a conversational manner with ten-minute refreshers, exercises that provide hints to achieve the correct answer, and a "more to explore" section with hundreds of questions and assessments students can use to reinforce concepts."

Love of Math Becomes Entrepreneurial Asset

The K-W Record, November 2006

The Record's Business section carried a front page story on the importance of math in the new economy. "Engineers need to dig deeper into the underlying principles of their machines. That is all done with mathematics," said Keith Geddes, co-founder of Maplesoft.

In addition to these articles, check out the [Media Center](#) for all the latest coverage on Maplesoft.



www.maplesoft.com

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