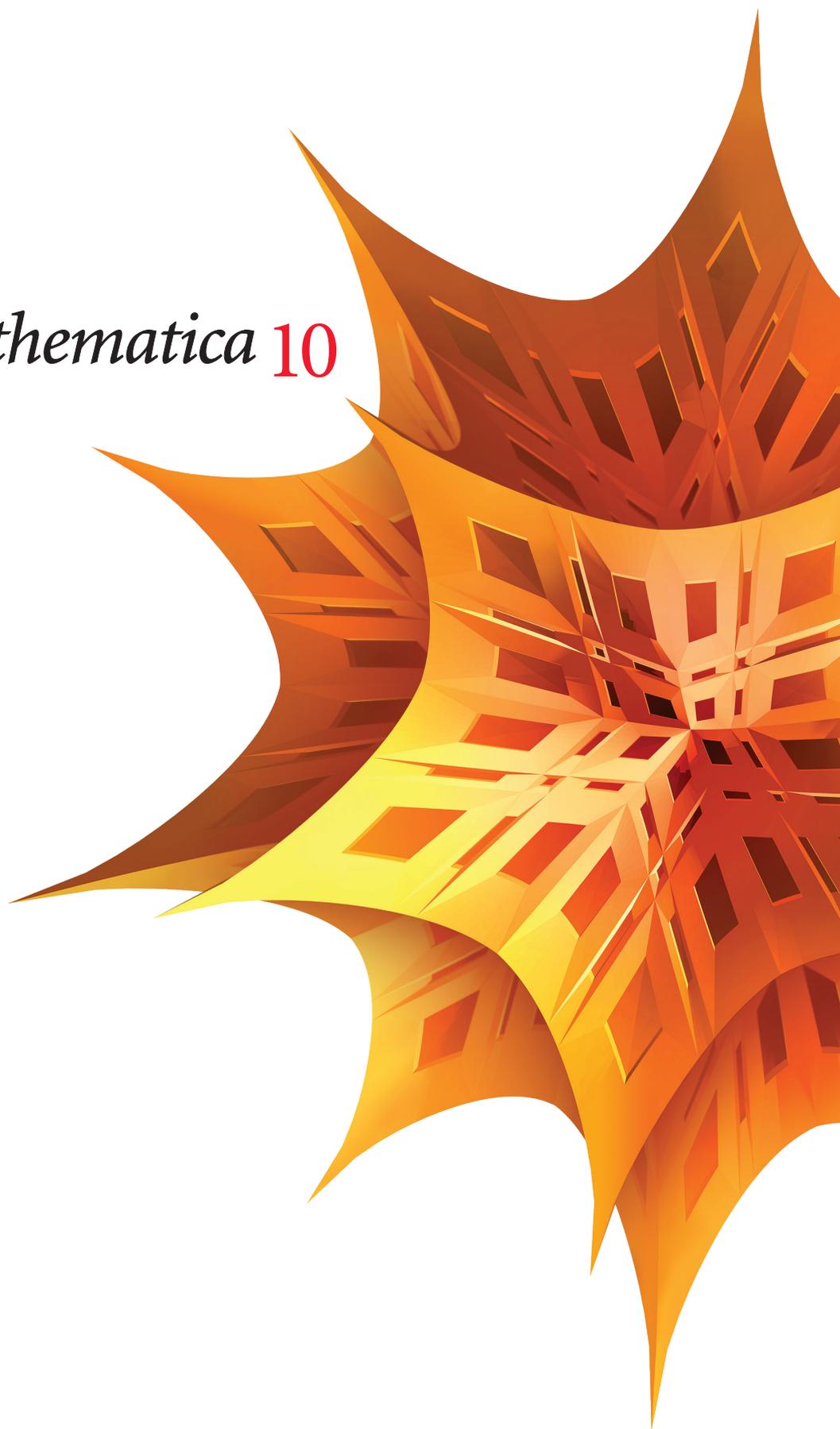


What's New in
Wolfram *Mathematica* 10



What's New in *Mathematica* 10

700+ new functions—and that's just the beginning

Mathematica celebrated its 25th anniversary in 2013, and is stronger than ever. Leveraging its core principles of automation and unification, it's advancing at an ever-increasing rate.

Mathematica 10 introduces a host of new areas—such as machine learning, computational geometry, geographic computation, and device connectivity—as well as deepening capabilities and coverage across the algorithmic world.

Mathematica 10 is the first version of *Mathematica* based on the complete Wolfram Language.



Introducing *Mathematica* Online

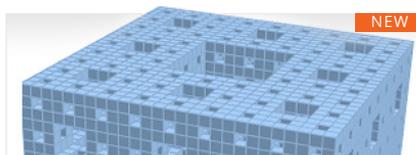
Now use *Mathematica* in the Wolfram Cloud directly from your web browser, with no installation required. Or get the best of both desktop and cloud with *Mathematica* 10 + *Mathematica* Online.

Featured *Mathematica* 10 Areas



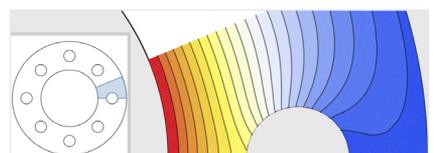
Mathematical Structures

- Larger-Scale & Extended Algebra
- Formal Math Operators
- Dimensional Variables
- Enhanced Graph Computation



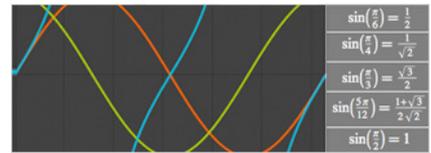
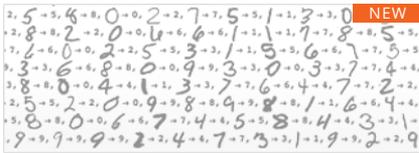
Geometric Computation

- Symbolic Geometry
- Named & Formula Regions
- Mesh-Based Regions



Differential Equation Solving

- Partial Differential Equations (PDEs) & Finite Elements
- Symbolic Delay Differential Equations (DDEs)
- Hybrid Differential Equations



Machine Learning

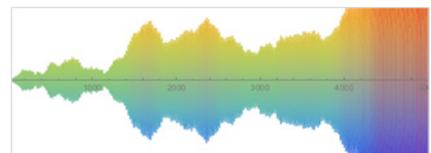
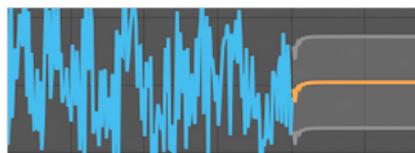
Highly Automated Machine Learning
 Built-in Classifier Collection
 Automated Time Series Analysis

Structured & Semantic Data

Semantic Data Import
 Domain-Specific Language Interpretation
 Dataset & Query Framework

Core Language Enhancements

Key-Value Associative Arrays
 Enhanced Functional Programming
 Symbolic Program Manipulation



Geographic Computation

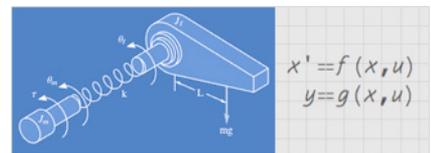
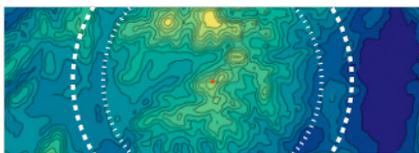
Geographic Visualization
 Geo-Related Properties
 Entity-Based Geocomputation

Time-Related Computation

Symbolic Dates & Times
 Time Series Processing

Random Process Analysis

Hidden Markov Processes & More
 Random Time Series



Visualization & Graphics

Theme-Based Styling
 New Visualization Categories
 Geographic Visualization

Image Processing

More 2D Image Processing
 More 3D Image Processing
 Extended Color Support

Engineering Computation

PDEs & Finite Elements
 Nonlinear Control Systems
 Enhanced Signal Processing



Software Engineering

String, File, HTML Templating
 Automated Report Generation
 Integrated Unit Testing

External Connectivity

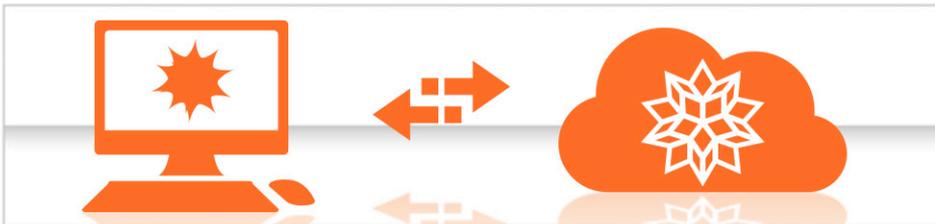
Connected Device Framework
 Curated API Framework
 URL Manipulation

(continued on back)



Expanded Wolfram Knowledgebase

Mathematica has access to the full, newly expanded Wolfram Knowledgebase via the Wolfram Language. All *Mathematica* users get free introductory use of the Wolfram Knowledgebase.



Integration with the Wolfram Cloud

Mathematica 10 connects *Mathematica* to the new Wolfram Cloud ecosystem. *Mathematica* customers get free introductory use of the Wolfram Cloud.

Visit our website to get a free trial and explore the new features in *Mathematica* 10:

www.wolfram.com/mathematica

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QUESTIONS?

Contact us and let us work with you to find the right solution for your computational needs.

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