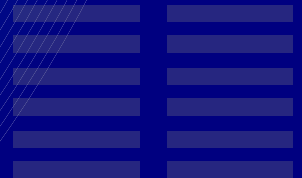


О СИСТЕМАХ КОМПЬЮТЕРНОЙ МАТЕМАТИКИ НА ОСНОВЕ СВОБОДНОГО ПРОГРАММНОГО ОБЕСПЕЧЕНИЯ



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Scilab is produced within [DIGITEO](#) by the Scilab Consortium and thus takes advantage of an exceptional environment for its development.

Latest news

Feb 12, 2009

[Scilab 5.1](#) has been released : The Scilab Team is pleased to announce the latest stable release of Scilab.

Nov 26, 2008

[Training course](#) on the use of Scicos-FLEX code generator: [ZigBee](#) networks.
Dec 15-17, 2008 - Pisa, Italy

Oct 20, 2008

Cosateq Joins Scilab Consortium.
See the [press release](#).

Sept 12, 2008



Release of [Scilab 5.0](#): Distributed under the [CeCILL](#) license (GNU GPL compatible), Scilab 5.0, available for Windows and Linux, inaugurates the new generation of Scilab software.

Aug 21, 2008

[First digiteo annual forum](#)
October 2, 2008 - Supélec



Opinions

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“Scilab looks great. I've been using Matlab and various toolboxes for years but, unfortunately, many of my students are unable to access Matlab when they study off campus - it's too expensive for them. So I can create Scilab versions of some of my m-functions for them to use at home.”

[United Kingdom](#)

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Please take a few minutes to help us to learn about you, answer the [questionnaire](#).

New trends around Scilab

Готово

Одна активная загрузка (Осталось 14 минут)

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New trends around Scilab

Parallel execution on clusters and desktop grids

ProActive is the Java GRID middleware library for parallel, distributed and multi-threaded computing.



The goal of the [ProActive Interface](#) is to equip Scilab with a [generic interface](#) to Grid computing. This extension has to allow the deployment of Scilab instances on several nodes of the grid, to use these instances like computing engines, and to submit Scilab tasks over the grid.

Scilab/Scicos code generator for DSP/micro controller



Using the [Scilab/Scicos FLEX Toolbox](#) (now update to the last Scilab 4.1.2) it is possible to automatically generate code from Scicos diagrams to fast prototype digital control systems for micro controller and DSP embedded application.

This work has been done by Evidence (Italy) in collaboration with Simone Mannori (INRIA Roquencourt, Fr) and Roberto Bucher (SUPSI Lugano, Ch).

Embedding Scilab/Scicos



[Scilab-EMB](#) is the porting of the complete Scilab 4.x platform on a Linux OS optimized for embedded PC based on ARM processor. The full documentation of the project it is available on the [web site](#) maintained by Zhe Peng (Cn) and Longhua Ma (Cn).

Scilab in european and national projects

hArtes



Scilab takes part in European project named "[hArtes](#)" funded by FP6 call5 Embedded Systems. hArtes aims to lay the foundation for a new holistic (end-to-end) approach for complex real-time embedded system design, with the latest algorithm exploration tools and reconfigurable hardware technologies.

From the application point of view, the complexity of future multimedia devices is becoming too big to design monolithic processing platforms. This is where the hArtes approach with reconfigurable heterogeneous system becomes vital.

SCOS



Investments in industries and research labs are done too many times in the scientific computing area. Therefore, [SCOS](#) will propose to build up the necessary frame to make it easy through interoperability, open standards (for open or commercial applications) and using some Open Source easy-to-use tools.

Scientific Computing has to enter the world of industrialized solutions. Shared standards and interoperability should be the rule, no the exception any. This is the aim of the SCOS project: make the scientist's life easiest, sharing tools and results with its colleague when needed.

OMD



The Multidisciplinary Optimization project ([OMD](#)) is an initiative gathering public laboratories and companies around the optimization of complex systems. This project is supported by the participants and the National Agency of French Research / National Network of Software Technologies (ANR/RNTL).

Exploratory project OMD proposes the development of tools for collaborative and robust optimization. These tools will be validated on three real cases in aircraft, space and automobile industries. They will be available as Scilab toolbox.

Готово

 Одна активная загрузка (Осталось 6 минут)

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Scilab - LabVIEW™ Gateway



Connecting LabVIEW with Scilab ... and getting Scilab's power through LabVIEW.
Download [Scilab - LabVIEW Gateway](#).
LabVIEW is a trademark of National Instruments.

Scilab used in Eurocodes

The French Ministry of Ecology, Sustainable Development and Town and Country Planning [advises](#), for research departments and for public construction & building sector, to employ Scilab to get used to the Eurocodes.




The Eurocodes are a new set of European structural design codes for building and civil engineering works.

Scilab toolboxes

Scilab is an open source software. There are many ways to contribute to Scilab, and users are invited to share their experience of Scilab by submitting their own functions, toolboxes, documentation, user guides, translations etc. Your contribution to Scilab is welcome.
See the [dedicated web pages](#).

Numerical Mathematics Consortium



News release - Sep. 24, 2007
Numerical Mathematics Consortium Updates
Open Standard for Algorithm Development.
Revised Specification Addresses New Functions and Lays Foundation for Active Involvement.
See the [Press release](#).

Find the European site of the [NMC](#), the press releases and the works in progress about development of the semantics of the mathematical functions.

Scicos: Scilab's block diagram modeler/simulator

Developed by Metalau research-team, from [INRIA Paris - Rocquencourt](#) research center, Scicos is a graphical dynamical system modeler and simulator toolbox.
Scicos is used for applications in control, communication, signal processing, queuing systems, electromechanical, physical and biological systems.
With Scicos you can create block diagrams to model and simulate the dynamics of hybrid dynamical systems and generate standalone C source code.
Note that Scicos is delivered into Scilab.



*From model
to simulation
to machine*

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Консоль

scilab-5.1

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Startup execution:
loading initial environment

-->

SciPad 7.18 - Untitled1.sce (modified)

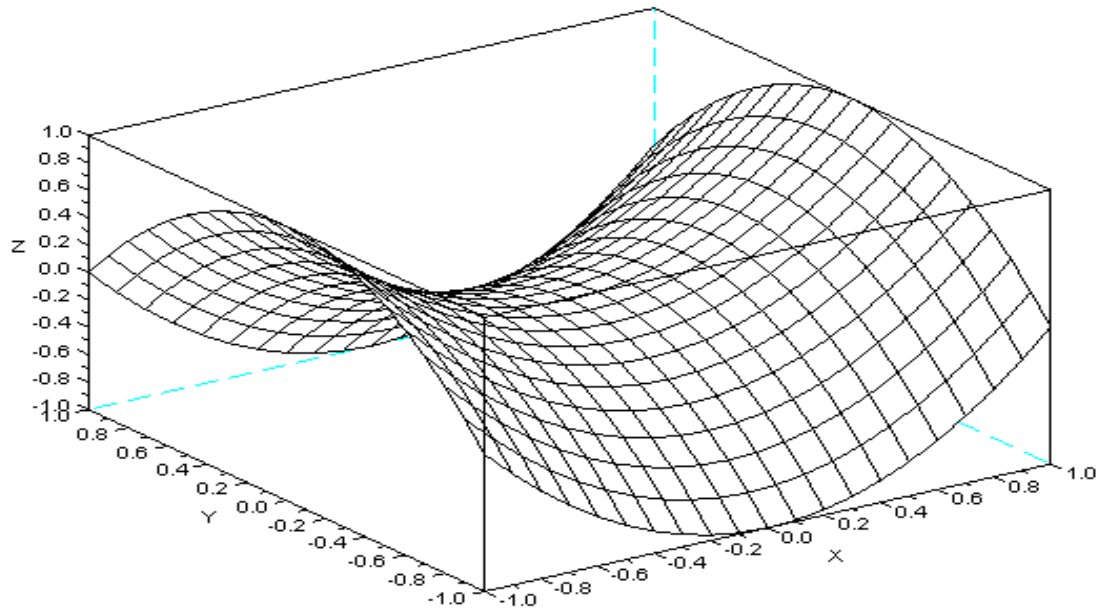
File Edit Search Execute Debug Scheme Options Windows Help

```
1 [X,Y]=meshgrid(-1:0.1:1,-1:0.1:1);  
2 Z=X.^2-Y.^2;  
3 mesh(X,Y,Z)
```

Графическое окно номер 0

File Tools Правка ?

Графическое окно номер 0



The figure displays a 3D wireframe mesh plot of the function $Z = X^2 - Y^2$. The plot is contained within a window titled 'Графическое окно номер 0'. The X and Y axes both range from -1.0 to 1.0, with major tick marks every 0.2 units. The Z axis ranges from -1.0 to 1.0, also with major tick marks every 0.2 units. The surface is a saddle shape, curving upwards along the X-axis and downwards along the Y-axis. The plot is rendered with a black wireframe grid on a white background.

Maxima

<http://maxima.sourceforge.net/ru/>


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Maxima — система для работы с символьными и численными выражениями, включающая дифференцирование, интегрирование, разложение в ряд, преобразование Лапласа, обыкновенные дифференциальные уравнения, системы линейных уравнений, многочлены, множества, списки, векторы, матрицы и тензоры. Maxima производит численные расчеты высокой точности, используя точные дроби, целые числа и числа с плавающей точкой произвольной точности. Система позволяет строить графики функций и статистических данных в двух и трех измерениях.

Исходный код Maxima может компилироваться на многих системах, включая Windows, Linux и MacOS X. На SourceForge доступны [исходные коды и исполняемые файлы для Windows и Linux](#).

Maxima — потомок Macsyma, легендарной системы компьютерной алгебры, разработанной в начале 60-х в [MIT](#). Это единственная основанная на Macsyma система, все еще публично доступная и имеющая активное сообщество пользователей благодаря своей открытости. Macsyma произвела в свое время переворот в компьютерной алгебре и оказала влияние на многие другие системы, в числе которых Maple и Mathematica.

Работу над Maxima вел Уильям Шелтер с 1982 года и до своей кончины в 2001 году. В 1998 году он получил разрешение на публикацию исходного кода под лицензией GPL. Выживание Maxima стало возможным только благодаря его усилиям и способностям, мы очень благодарны ему за уделенные проекту время и знания эксперта, которые поддерживали код DOE Macsyma актуальным и качественным. После его кончины была сформирована группа пользователей и разработчиков, ставящая своей целью донести Maxima до широкой аудитории.

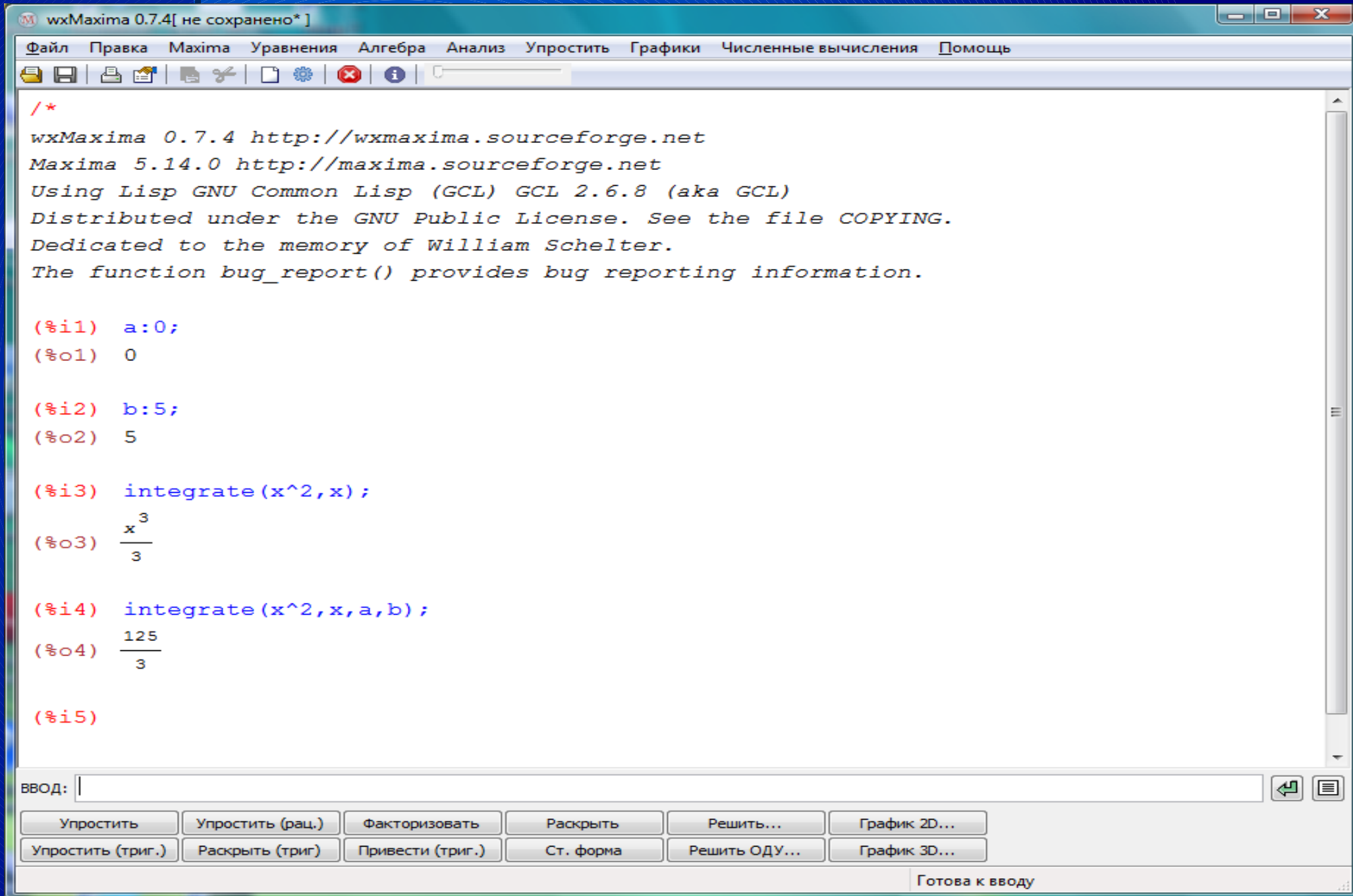
Мы постоянно обновляем Maxima, чтобы исправлять ошибки и улучшать код и документацию. От сообщества пользователей Maxima приветствуются замечания и участие в разработке. Большая часть обсуждений проходит в [списках рассылки](#).

Новости

- 26 декабря 2008 г. — Maxima 5.17.1.

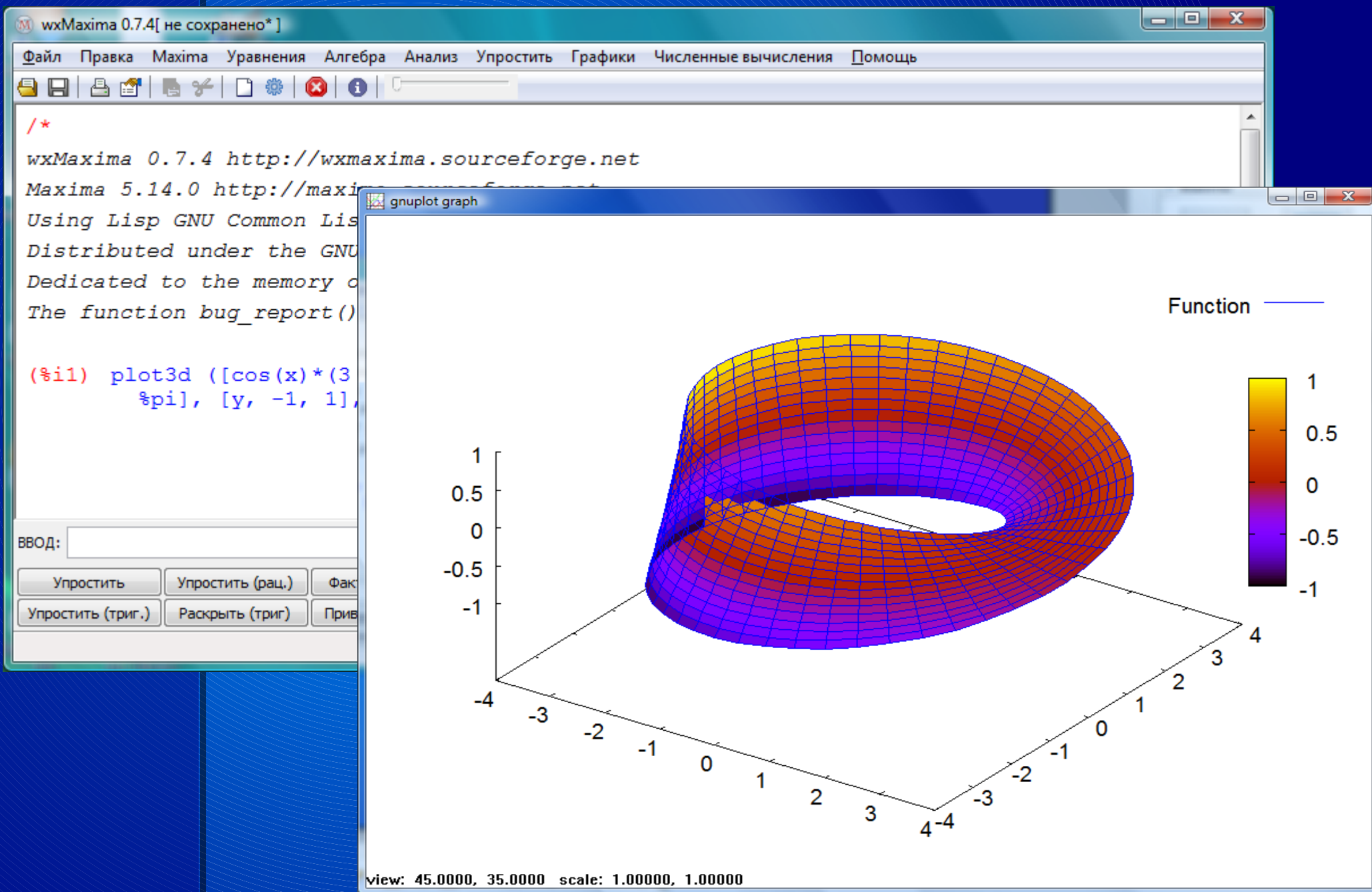
Maxima

<http://maxima.sourceforge.net/ru/>



Maxima

<http://maxima.sourceforge.net/ru/>





<http://r-project.org/>

The R Project for Statistical Computing - Mozilla Firefox

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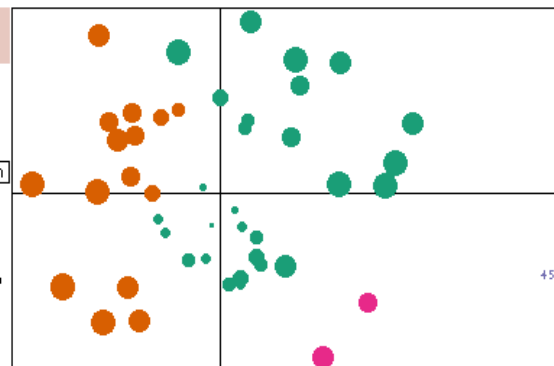
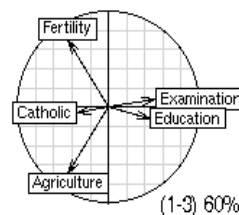
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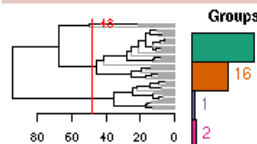
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PCA 5 vars

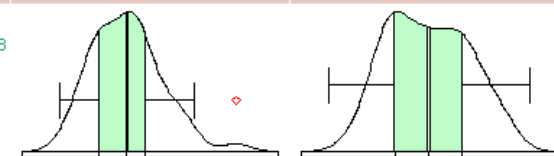
`princomp(x = data, cor = cor)`



Clustering 4 groups



Groups



Getting Started:

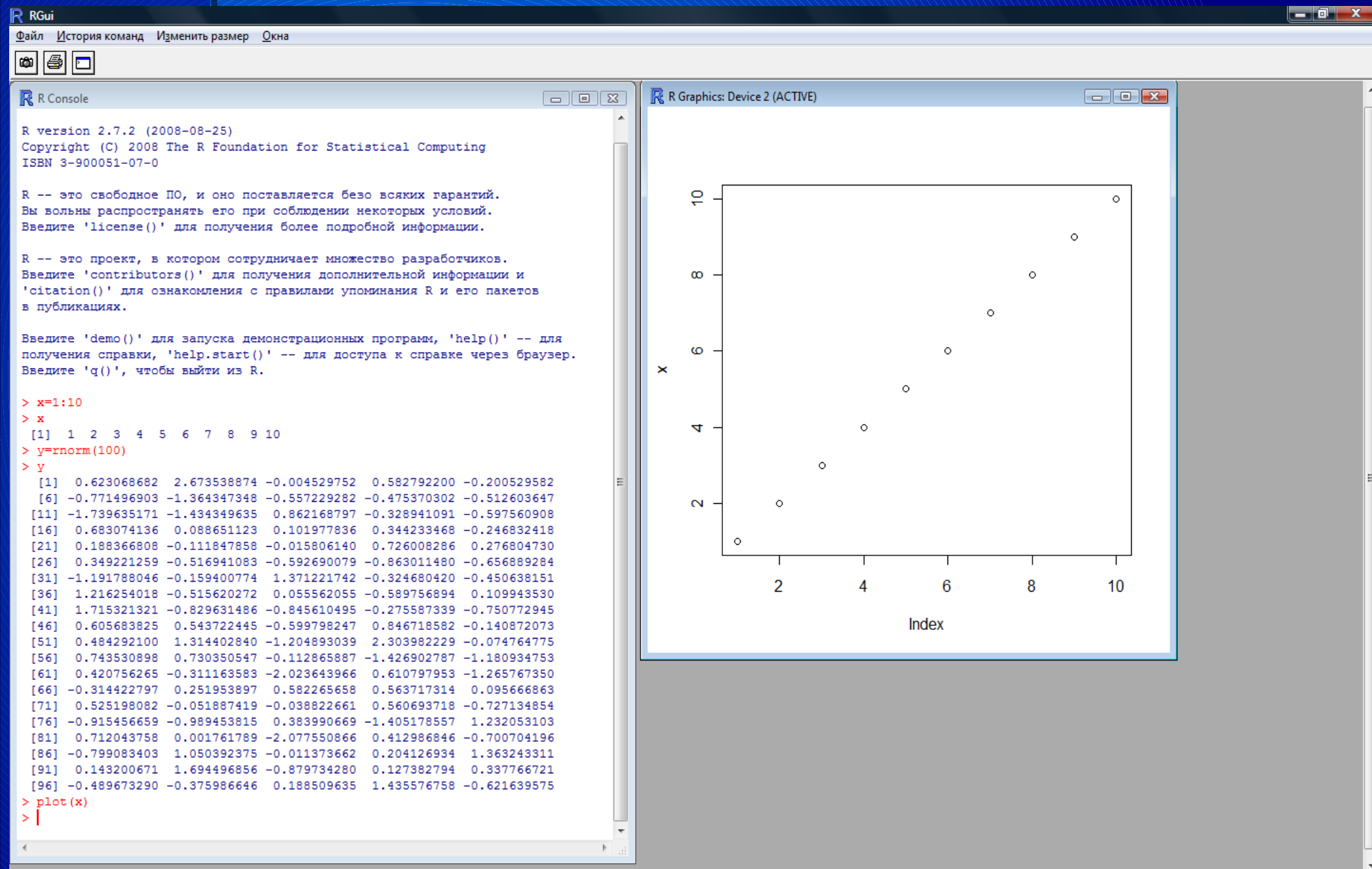
- R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To [download R](#), please choose your preferred [CRAN mirror](#).
- If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

News :

- [R version 2.8.1](#) has been released on 2008-12-22.
- [R News 8/2](#) has been published on 2008-11-03.
- [DSC 2009](#), The 6th workshop on Directions in Statistical Computing, will be held at the Center for Health and Society, University of Copenhagen, Denmark, July 13-14, 2009.
- [useR! 2009](#), the R user conference, will be held at Agrocampus Rennes, France, July 8-10, 2009.
- [useR! 2008](#), has been held at Dortmund University, Germany, August 12-14, 2008.

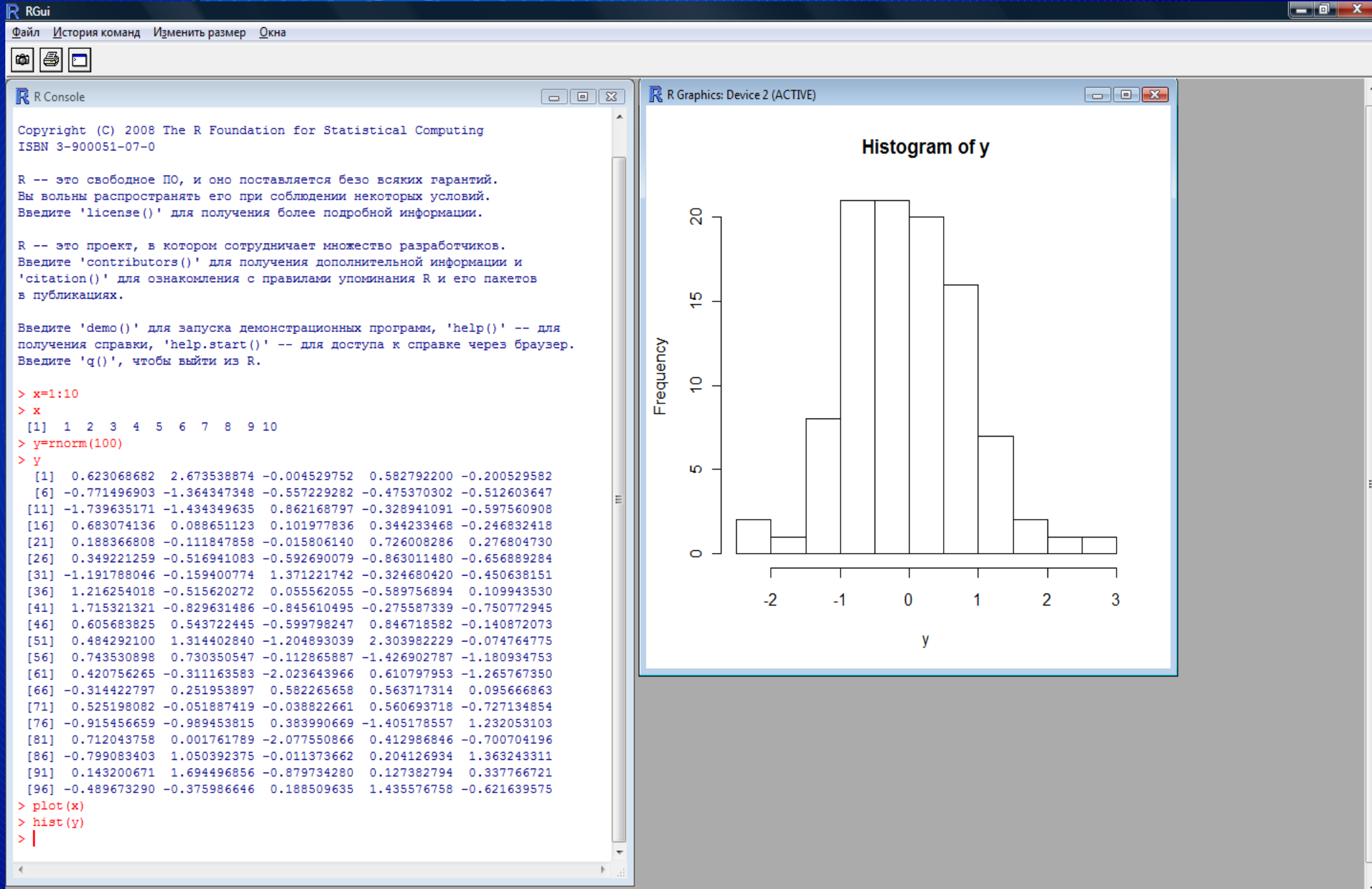


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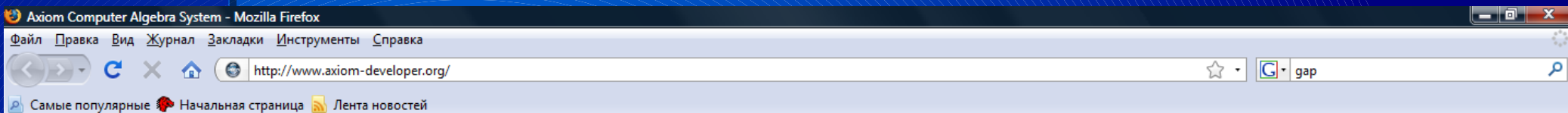


<http://r-project.org/>



Axiom

<http://www.axiom-developer.org/>



axiom[™]

The Scientific Computation System

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DOCUMENTATION:

- Books
 - [Jenks, R.D and Sutor R, "Axiom: The Scientific Computation System"](#)
 - [Daly, T, "Axiom Volume 1: Tutorial"](#)
- Literate Documents
 - [dhlmatrix.spad.pdf](#)
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What is Axiom?

Axiom has been in development since 1971. At that time, it was called Scratchpad. Scratchpad was a large, general purpose computer algebra system that was originally developed by IBM under the direction of Richard Jenks. The project started in 1971 and evolved slowly. Barry Trager was key to the technical direction of the project. Scratchpad developed over a 20 year stretch and was basically considered as a research platform for developing new ideas in computational mathematics. In the 1990s, as IBM's fortunes slid, the Scratchpad project was renamed to Axiom, sold to the Numerical Algorithms Group (NAG) in England and became a commercial system. As part of the Scratchpad project at IBM in Yorktown [Tim Daly](#) worked on all aspects of the system and eventually helped transfer the product to NAG. For a variety of reasons it never became a financial success and NAG withdrew it from the market in October, 2001.

NAG agreed to release Axiom as free software. The basic motivation was that Axiom represents something different from other programs in a lot of ways. Primarily because of its foundation in mathematics the Axiom system will potentially be useful 30 years from now. In its current state it represents about 30 years and 300 man-years of research work. To strive to keep such a large collection of knowledge alive seems a worthwhile goal.

Gap

<http://www.gap-system.org/>

GAP System for Computational Discrete Algebra - Mozilla Firefox

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GAP - Groups, Algorithms, Programming - a System for Computational Discrete Algebra

What is GAP?

GAP is a system for computational discrete algebra, with particular emphasis on [Computational Group Theory](#). GAP provides a [programming language](#), a library of thousands of functions implementing algebraic algorithms written in the GAP language as well as large [data libraries](#) of algebraic objects. See also the [overview](#) and the description of the [mathematical capabilities](#). GAP is used in research and teaching for studying groups and their representations, rings, vector spaces, algebras, combinatorial structures, and more. The system, including source, is distributed [freely](#). You can study and easily modify or extend it for your special use.

The current release is GAP 4.4.12. The pages of this web site describe this release if not stated otherwise. The webpage [updates](#) explains the history of changes. The older version [GAP 3](#) is still available.

We Invite You to Cooperate

The [GAP Group](#) welcomes [contacts](#) with the GAP users and offers support for them. To keep up to date on GAP news (discussion of problems, release announcements, bug fixes), we suggest you [subscribe](#) to the email [GAP Forum](#).

Please [tell us](#) about use of GAP in your research or teaching. We may well want to provide a link to your work. If your work is published then we ask you to [cite](#) GAP like a journal article or book.

We maintain a [Bibliography](#) of publications citing GAP. Please [help us](#) keeping it up to date.

We welcome contributions to GAP. We provide [advice](#) to write GAP code, inform you how to [submit](#) contributions to GAP, and keep a list of [possible GAP projects](#).

Acknowledgements

GAP has been and is developed by international cooperation of many [people](#), including user contributions. We gratefully acknowledge all this help as well as some [funding](#). GAP was started at [Lehrstuhl D für Mathematik](#) RWTH Aachen in 1986. After 1997 the development of GAP was coordinated in [St Andrews](#). At present (March 2005) the [GAP Centers](#) in

Sage


<http://www.sagemath.org/>

Sage: Open Source Mathematics Software - Mozilla Firefox

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Sage is a free [open-source](#) mathematics software system licensed under the GPL. It [combines the power](#) of many existing [open-source packages](#) into a common Python-based interface.

Mission: *Creating a viable free open source alternative to Magma, Maple, Mathematica and Matlab.*


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