

KNOPPIX/Math: a live system for mathematics



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KNOPPIX

- CD/DVD bootable Linux
- Made by Klaus Knopper in Germany
- The set of Open Source Software(OSS)
 - We can study and change and redistribute source code of software.
 - Originary from the idea of Free Software.

The benefit of KNOPPIX

- We can use it on any PC
 - Microsoft Windows PC
 - Apple MacOS X Computer with Intel CPU.
- We do not need to install it.
- CD/DVD is stable.
- Same environments in anywhere.
- When you eject CD/DVD, it returns usual.
- You can copy and redistribute “network downloadable edition” freely.

What is KNOPPIX/Math?



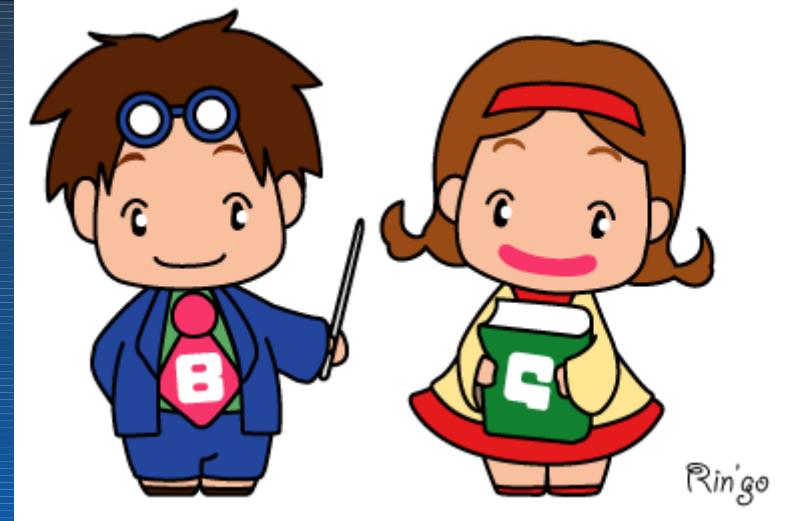
- Made by KNOPPIX/Math Project
- Over 100 pieces of math software is included.
- We have two editions, one is pressed, and the other is a network downloadable.

mathsoftware.org in ICM2006

- 2006.8.22 – 30 Madrid in Spain.




Supported by



- The JST CREST
 - JST is Japan Science and Technology agency
 - CREST is Core Research for Evolutional Science and Technology
 - “Harmony of Gröbner bases and the modern industrial society”
 - Team Leader : Takayuki Hibi (Osaka University)
 - Pure Mathematics Group
 - Applied Mathematics Group
 - Computational Mathematics Group
 - Group Leader : Nobuki Takayama (Kobe University)

mathsoftware.org in ICM2010



ICM 2010

INTERNATIONAL CONGRESS
OF MATHEMATICIANS 2010

19th - 27th August, 2010
Hyderabad International
Convention Centre, INDIA

ABSTRACT SYMMETRY will surely be a recurring theme at Hyderabad.
Elsewhere in India you can see the tiger in the wild and wonder:
"What immortal hand or eye
Could frame thy fearful symmetry."

Pre-registration is now open

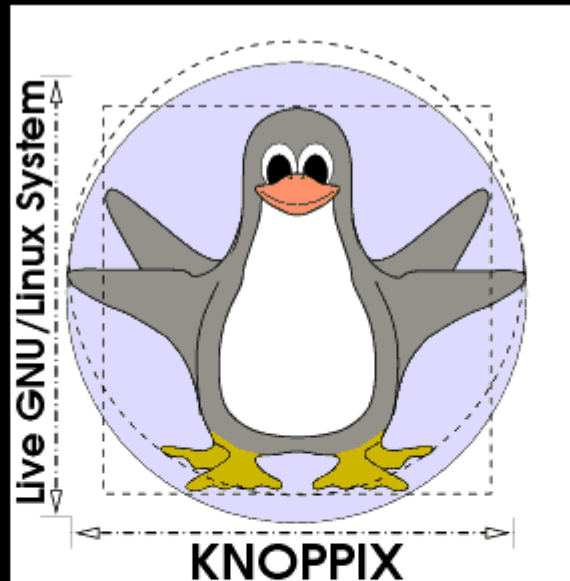
From "Songs of Experience" by William Blake

<http://www.icm2010.org.in>

How to boot KNOPPIX/Math

- Windows PC
 1. Boot Windows
 2. Open the DVD drive
 3. Set KNOPPIX/Math DVD and close it.
 4. Reboot
- MacOS X with Intel CPU
 1. Boot Mac
 2. Set KNOPPIX/Math DVD
 3. Reboot
 4. Wait with pushing C key

Boot menu



KNOPPIX 6.2

Release Information: <http://knopper.net/knoppix/>

KNOPPIX/Math/2010 The Next Generation
boot: _

RELEASE: 2010-06-09

KNOPPIX is booting.

```
Welcome to Knoppix 6 based on MICROKNOPPIX!
```

```
Linux Kernel 2.6.31.6, 128 MB RAM.
```

```
CPU 0: Pentium II (Klamath) @ 2393MHz, 2048 KB Cache
```

```
Knoppix 6 found at: /dev/sr0
```

```
>>> Starting in Live-Mode.
```

```
<<<
```

```
>>> Please do not remove medium until shutdown!
```

```
<<<
```

```
[ 2.545267] cloop: Initializing cloop v2.631-opt
```











































```
INIT: version 2.86 booting
```

```
[udev] [log]
```

```
System Setup... ██████████
```

```
Starting syslog daemon (console 12)...
```

```
-
```

 3D-XplorMath-j	 C.a.R.	 CMCLab	 CoCoA	 CoqIDE Proof Assistant	 DecimalBASICS	 Dr. Geo
 GAP	 GEONExT	 GNU TeXmacs Editor	 GeoGebra	 GeoProof	 GiANT	 Hyplane
 JavaView	 K3DSurf	 KASH/KANT 3	 KETpic-Scilab	 KNOPPIX-Math-Start	 KNOT	 KSeg
 Kan/SM1	 KidsCindy	 LiE	 Macaulay2	 MathDoc-Search	 Maxima Algebra System	 NZMATH
 OpenDX Data Explorer	 PARI/GP	 Processing	 QtOctave	 R Commander	 RKWard	 Reduce
 Risa/Asir	 SAGE	 Scilab	 Scratch	 Singular	 SnapPea	 Step

KNOPPIX-Math-Start

ファイル(F) 編集(E) 表示(V) 履歴(S) ブックマーク(B) ツール(T) ヘルプ(H)

file:///UNIONFS/usr/share/knoppix-math-start/km-s-en.html

Google

よく見るページ Getting Started Latest Headlines

[Japanese]

KNOPPIX/Math



- [KNOPPIX/Math](http://www.knoppix-math.org/) (<http://www.knoppix-math.org/>)
- [KNOPPIX/Math Documents](#)

Mathematical software projects

1. [3D-XplorMath-J](http://3d-xplormath.org/j/) (<http://3d-xplormath.org/j/>)

- o Visualization and experimental tool for mathematics
- o 3D-XplorMath-J is a program for visualizing and experimenting with a variety of mathematical objects or "exhibits."
- o Commands

3D-XplorMath-J





MathDoc-Search

- Full document search engine of Math Documents

The screenshot shows a Konqueror browser window with the title "Namazu: a Full-Text Search Engine for KNOPPIX/Math: <Groebner basis> - Konqueror". The address bar contains the URL "http://localhost/cgi-bin/namazu.cgi?query=Gro". The main content area displays the search engine's title and a description of the index. At the bottom, there is a search form with a query input field containing "Groebner basis", a "Search!" button, and a link to "[How to search]". Below the search form, there are dropdown menus for "Display" (set to 20), "Description" (set to normal), and "Sort" (set to by score).

Namazu: a Full-Text Search Engine for KNOPPIX/Math: <Groebner basis> - Konqueror

Location Edit View Go Bookmarks Tools Settings Window Help

Location: <http://localhost/cgi-bin/namazu.cgi?query=Gro> Google Search

CD index KNOPPIX LinuxTag KNOPPIX-jp KNOPPIX/Math KNOPPIX-Edu

Namazu: a Full-Text Search Engine for KNOPPIX/Math

This index contains 38,835 documents and 2,751,668 keywords.





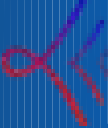


Last modified: 2009-03-06

Query: Search! [\[How to search\]](#)



Display: Description: Sort:

Results:

Computer Algebra Systems

- Maxima 
- Risa/Asir 
- CoCoA 
- Reduce 
- Singular 
- Macaulay2 
- SAGE 
- 4ti2, GAP, gfan, KANT, nzmth, PARI/GP, etc.

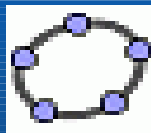
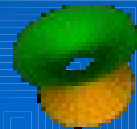
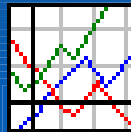
Numerical Computing

- Octave 
- Yorick 
- BLAS, LAPACK
- NumPy
- ...



Visualization Tools

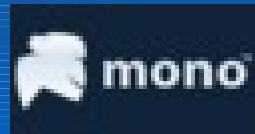
- Geomview
- Gnuplot
- K3dSurf
- Javaview
- Yorick
- GeoGebra
- Surf, surfex, surfer
- Processing
- ...



Programming Languages

- Fortran

- C, C++, C#(Mono)



- Java

- Prolog



- Perl, Python, Ruby



- Objective Caml



- Haskell...

VMware KNOPPIX/Math

- Kobe University
- <http://www.math.kobe-u.ac.jp/vmkm/vmkm-en.html>
- Search keywords with “Vmware and KNOPPIX/Math”

flash-knoppix

- making script for bootable USB flash drive
- It's very convenient, but please take care.

