OpenDreamKit Glossary





⊗ binder	web-application for Jupyter notebook visualization from a github
	repository
CAS	http://mybinder.org/
	Computer Algebra System
? ython	optimising static compiler from Python to C
	http://cython.org
docker	software container platform (alternative to VM)
	https://www.docker.com
findstat	collaborative database for combinatorial statistics
	http://www.findstat.org/
flint	C library for number theory
	http://flintlib.org
GAB	CAS for discrete computational algebra
4	https://www.gap-system.org
♦ git	a version control system
V 8	https://git-scm.com/
GitHub 💮	website for collaborative software development based on git
Sitility T	https://github.com
HPC	High Performance Computing
IPython	IPython is a command shell for interactive computing
IP[y]:	https://ipython.org
JOOMMF	Jupyter-OOMMF
JOOMINIF	http://joommf.github.io
💢 jupyter	web-application for interactive computations
Jupyter	http://jupyter.org/
Jupyterhub	configurable multi-user Jupyter server
Jupyternub	https://jupyterhub.readthedocs.io
LinBox	exact linear algebra C++ library
	http://www.linalg.org
LMFDB	L-functions and Modular Forms Database: collaborative knowledge
	and data-base for number theory
	http://www.lmfdb.org/
MathHub	portal for active mathematical documents and formalizations
Ma(I) ob	https://mathhub.info
MMT	Meta-Meta-Tool: data/knowledge/software management frame-
	work based on OMDoc/MMT
MPIR	C library for multiprecision integer and rational arithmetic
	http://mpir.org

nbdime Jupyter notebooks	nbdime	notebook diffing and merging: Python library for version control for
Python library to test Jupyter notebooks https://github.com/computationalmodelling/nbval Python library for N-dimensional arrays and linear algebra https://www.numpy.org OEIS		· · · · · · · · · · · · · · · · · · ·
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OEIS The On-Line Encyclopedia of Integer Sequences https://oeis.org/ Open Mathematical Documents / Meta Meta Theories: representation format http://uniformal.github.io/doc/index.html OOMMF Object Oriented MicroMagnetic Framework http://math.nist.gov/oommf/ extensible standard for representing the semantics of mathematical objects http://openmath.org C library for number theory and command line interface https://pari.math.u-bordeaux.fr programming language and interpreter https://www.python.org Pythran Python to C++ compiler for a subset of the Python language, with a focus on scientific computing https://pythonhosted.org/pythran CAS which aggregates dozens of other softwares and libraries such as FLINT, GAP, MPIR, PARI/GP, Singular http://www.sagemath.org SMC SageMathCloud: web-appliction and website for collaborative work around Sage, Jupyter, LaTeX, https://cloud.sagemath.com Python libraries for mathematics, science, and engineering https://scipy.org SCSCP Symbolic Computation Software Composability Protocol		• • • • • • • • • • • • • • • • • • • •
OEIS The On-Line Encyclopedia of Integer Sequences https://oeis.org/ Open Mathematical Documents / Meta Meta Theories: representation format http://uniformal.github.io/doc/index.html OOMMF Object Oriented MicroMagnetic Framework http://math.nist.gov/oommf/ extensible standard for representing the semantics of mathematical objects http://openmath.org C library for number theory and command line interface https://pari.math.u-bordeaux.fr programming language and interpreter https://www.python.org Pythran Python Oc+compiler for a subset of the Python language, with a focus on scientific computing https://pythonhosted.org/pythran CAS which aggregates dozens of other softwares and libraries such as FLINT, GAP, MPIR, PARI/GP, Singular http://www.sagemath.org SMC SageMathCloud: web-appliction and website for collaborative work around Sage, Jupyter, LaTeX, https://cloud.sagemath.com Python libraries for mathematics, science, and engineering https://scipy.org SCSCP Symbolic Computation Software Composability Protocol	NumPy	Python library for N-dimensional arrays and linear algebra
OMDoc/MMT OPEN Mathematical Documents / Meta Meta Theories: representation format http://uniformal.github.io/doc/index.html OOMMF Object Oriented MicroMagnetic Framework http://math.nist.gov/oommf/ extensible standard for representing the semantics of mathematical objects http://openmath.org C library for number theory and command line interface https://pari.math.u-bordeaux.fr programming language and interpreter https://www.python.org Pythran Python to C++ compiler for a subset of the Python language, with a focus on scientific computing https://pythonhosted.org/pythran CAS which aggregates dozens of other softwares and libraries such as FLINT, GAP, MPIR, PARI/GP, Singular http://www.sagemath.org SMC SageMathCloud: web-appliction and website for collaborative work around Sage, Jupyter, LaTeX, https://cloud.sagemath.com Python libraries for mathematics, science, and engineering https://scipy.org SCSCP Symbolic Computation Software Composability Protocol		https://www.numpy.org
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OOMMF Object Oriented MicroMagnetic Framework http://math.nist.gov/oommf/ extensible standard for representing the semantics of mathematical objects http://openmath.org C library for number theory and command line interface https://pari.math.u-bordeaux.fr programming language and interpreter https://www.python.org Pythran Python to C++ compiler for a subset of the Python language, with a focus on scientific computing https://pythonhosted.org/pythran CAS which aggregates dozens of other softwares and libraries such as FLINT, GAP, MPIR, PARI/GP, Singular http://www.sagemath.org SMC SageMathCloud: web-appliction and website for collaborative work around Sage, Jupyter, LaTeX, https://cloud.sagemath.com Python libraries for mathematics, science, and engineering https://scipy.org SCSCP Symbolic Computation Software Composability Protocol	OMDoc/MMT	
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SIMD Single Instruction Multiple Data (in-core parallelism)	SCSCP	Symbolic Computation Software Composability Protocol
Single instruction triatiple Data (in core parametrsin)	SIMD	Single Instruction Multiple Data (in-core parallelism)
CAS for commutative algebra and algebraic geometry	SINGULAR «	CAS for commutative algebra and algebraic geometry
https://www.singular.uni-kl.de		https://www.singular.uni-kl.de
(Sun) Grid Engine and derivatives: distributed resource manager	SGE	
https://arc.liv.ac.uk/trac/SGE		
Virtual Machine: software that amulates a computer system inside	VM	-
an operating system		
VRE Virtual Research Environment	VRE	