Software on Idun

Idun has a plethora of software preinstalled. Please use module spider to see the full list of available modules and their corresponding versions. The following table provides an incomplete excerpt:

Type	Software	Description	Usage on Idun
Compilers	cython	Optimizing compiler for Python and the Cython programming language.	
	GCC	A compiler suite including a C, C++, Objective-C, Fortran, Ada, Go, and D compiler.	
	Intel	A compiler suite including a C, C++, and Fortran compiler.	
Applications	Fluent	Software suite for performing Computational Fluid Dynamics (CFD) simulations.	
	Matlab	Programming language and numerical computing environment.	
	OpenFOAM	C++ toolbox for performing CFD simulations and the development of numerical solvers.	
Libraries	Boost	Set of C++ libraries providing support for tasks such as linear algebra, image processing, regular expressions, etc.	
	FFTW	C library for computing the discrete Fourier transform in one or more dimensions.	See here for more information
	GDAL	Translator library for raster and vector geospatial data formats.	
	GSL	Numerial C/C++ library with a wide range of numerical routines.	See here for more information
	HDF5	Library for storing and organizing large amounts of (hierarchical) data.	See here for more information
	Hypre	Library with scalable linear solvers and multgrid methods.	
	Intel MKL	Library with optimized math routines.	
	Intel MPI	Message-passing library implementing the MPICH specification.	
	Java	Programming language.	
	METIS	Set of programs for partitioning graphs and finite element meshes, as well as producing fill reducing orderings for sparse matrices.	
	MUMPS	Parallel sparse direct solver for linear algebraic equations.	
	netCDF(-Fortran)	Set of libraries and data formats for the creation, access, and sharing of array-oriented scientific data.	See here for more information
	OpenMPI	Message-passing library implementing the MPICH specification.	
	OpenBLAS	Optimized BLAS library.	See here for more information
	ParMETIS	Extension of the METIS library.	
	PROJ	Coordinate transformation software for geospatial coordinates.	
	ScaLAPACK	Library of high-performance linear algebra routines.	
	TensorFlow	Library for high performance numerical computations with strong support for machine and deep learning.	See here for more information
	UDUNITS	C library for arithmetic manipulation of units and conversion of numeric values between compatible units.	
Tools	CMake	Tools for building and testing package software.	
	Go	Programming language.	
	ncview	Visual browser for netCDF files.	See here for more information
	PAPI	Tools for utilizing the performance counter hardware of microprocessors.	
	Python2/3	Programming language.	
	R	Software environment for statistical computing and graphics.	
Python /Packages	Boost.Python	C++ library enabling interoperability between C++ and Python.	
	h5py	Python interface for the HDF5 binary data format.	
	matplotlib	Plotting library for Python.	
	mpi4py	Message Passing interface bindings for Python.	

	netcfd4-python	Python interface to the netCDF C library.	
	numpy	Package for scientific computing with Python.	
	pandas	Data structures and data analysis tools for Python.	
	scipy	Python software suite for mathematics, science, and engineering.	
	virtualenv	Tool to create isolated Python environments.	