Engineering Simulation Software Packages(Open Source)

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Computer Aided Design (CAD) Software

- BRL-CAD
- OpenSCAD
- Python CAD
- FreeCAD
- Archimedes

Finite Element Modeling / Analysis and Computational Fluid Dynamics Software

- DUNE: (GPL with runtime exception) a modular toolbox for solving partial differential equations (PDEs) on parallel adaptive grids with finite element, finite volume, or finite difference
- Impact (GPL): Dynamic finite element suite
- Code-Aster: Finite element modeling software
- SALOME (LGPL): Platform for Pre and Post-Processing for numerical simulation.
- Elmer: Finite Element Software for Multiphysical Problems
- Gmsh: A three-dimensional finite element mesh generator with built-in pre and post-processing facilities
- OpenFVM: A general three-dimensional CFD solver that uses Gmsh for pre- and post-processing Calculix A FEM program with interactive graphics

Numerical Programming Languages and Visualization Software

- Octave (GPL): A high-level language, primarily intended for numerical computations, using a language that is mostly compatible with Matlab Package of Additional Octave Libraries
- SAGE (GPL): Open source alternative to Magma, Maple, Mathematica and Matlab
- ASCEND: modelling environment
- OpenDX (IBM): Visualization Software
- Freshmeat.net Visualization Software Listing
- VisIt (BSD): Visualization/Graphical Analysis
- EngLab (GPL): Engineering mathematical platform
- SciLab (CeCILL license): Numerical computation platform
- WorldWind (NOSA): Geographic information visualization software (including Earth and Mars)
- Numpy/Scipy: Fast Numerical Computation Platform for Python.

Electronic Design Automation (EDA)

- http://www.opencollector.org/collector.php
- EETimes.com: Open Source EDA Listing by EETimes.com
- Freshmeat.net Electronic Design Automation Listing
- GEDA: Free, open sourced ensemble of EDA packages. Schamatic, PCB, FPGA, project organizer.
- FREE PCB: Free, open sourced PCB layout package with autorouter. Windows only.
- Tinycad: Free, open sourced schematic package. Windows only.
- KiCAD: Open sourced EDM package capture, PCB, DRC, Sim, Windows and Linux.

List of computer simulation software-oss

- ASCEND: open source equation-based modeling environment.
- Facsimile: a free, open-source discrete-event simulation/emulation library.
- Galatea: A multi-agent, multi-programming language, simulation platform.
- GarlicSim: an open-source simulation with a simple GUI framework that is based on Python.
- NS2: a popular Open Source network simulator.
- Physics Abstraction Layer: an open source physics simulation package.
- SimPy: an open-source discrete-event simulation package based on Python.
- Tortuga: An open source software framework for discrete-event simulation in Java.
- GNU Octave: An Open Source mathematical modeling and simulation software exactly similar to MATLAB, with a few differences.

List of computer simulation software-Commercial

- ACSL and acslX - Advanced Continuous Simulation Language
- AMESim - platform to analyze multi-domain, intelligent systems and predict and optimize multi-disciplinary performance. Developed by LMS International
- AnyLogic - Multimethod simulation modeling tool for business and science. Developed by XJ Technologies
- Arena - simulation and automation software developed by Rockwell Automation
- Chemical WorkBench - Chemical kinetics simulation software tool developed by Kintech Lab
- CircuitLogix - Electronics simulation software developed by Logic Design Inc.
- COMSOL Multiphysics - (formerly FEMLAB) is a finite element analysis, solver and Simulation software / FEA Software package for various physics and engineering applications, especially coupled phenomena, or multiphysics.
- DX Studio - Suite of tools for simulation and visualization.

List of computer simulation software-Commercial

- Dymola - Modeling and simulation software based on the Modelica language.
- GoldSim - Combines system dynamics with aspects of discrete event simulation, embedded in a Monte Carlo framework.
- iGrafx Process - Software for business process modeling and simulation
- Khimera - Chemical kinetics simulation software tool developed by Kintech Lab
- Maple - is a general-purpose computer algebra system developed and sold commercially by Waterloo Maple Inc.
- MapleSim - is a multi-domain modeling and simulation tool developed by Waterloo Maple Inc.
- Mathematica
- MathModelica - Modeling and simulation software based on the Modelica language.
- Modelica (an open standard for modelling software)
- NEi Nastran - Software for engineering simulation of stress, dynamics, and heat transfer in structures.
- NetSim - A popular network simulation software for education research

List of computer simulation software-Commercial

- Plant Simulation - Plant, line and process simulation and optimization software, developed by Siemens PLM Software.
- PRO/II - Steady State Chemical Process Simulation and extensively used by Oil and Gas Refineries.
- RoboLogix - Robotics simulation software developed by Logic Design Inc.
- simCYP - Modeling and simulation software for pharmaceutical research, drug drug interactions, PBPK, Population Pharmacokinetics
- SIMUL8 - Software for discrete event or process based simulation.
- Simulations Plus - Modeling and simulation software for pharmaceutical research
- SimulationX - Modeling and simulation software based on the Modelica language.
- Simulink from MathWorks (block diagrams, electrical mechanical systems, machines)
- VisSim (block diagram language for electro-mechanical, bio-medical, chemical, hydraulic and thermal process models)
- VisualSim - Modeling and Simulation software with emphasis on discrete event, continuous, FSM domains.