



RESEARCH,
CLASSROOM
AND LAB SOLUTIONS

ACADEMIA SOLUTIONS

RESEARCH, CLASSROOM AND LAB SOLUTIONS

Trident Infosol helps you take your research projects to the next level by offering some of the best-in-class industry de-facto Solutions.

Tomorrow's technological advances are dependent on today's learning experiences and that is where we lay a platform to give students the knowledge they need to succeed in their future careers.

Our solutions offer a seamlessly integrated workflow that ensures a genuinely hands-on teaching experience.

We help in the advancement of excellence in all aspects of engineering, engineering technology and design while fostering innovative student projects and professors' educational practices.

Our Solutions help Engineering and design students to express their talent and find the job of their dreams.

TESTIMONIALS



OUR OFFERINGS

DYMOLA

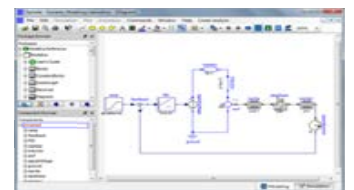
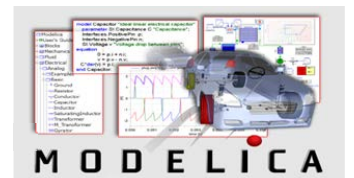
For Academic Institutions - Academic Learn / Innovate



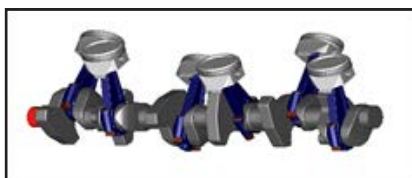
Dymola - A modeling and simulation environment based on the open Modelica modeling language.

Dymola has multi-engineering capabilities which mean that models can consist of components from many engineering domains. Using the Modelica language, sub-systems are represented by interconnected components; at the lowest level dynamic behavior is described by mathematical equations or algorithms.

Domain-specific knowledge is represented by Modelica libraries, containing components for **Mechanical, Electrical, Control, Thermal, Pneumatic, Hydraulic, Power Train, Thermodynamics, Vehicle Dynamics, Air Conditioning**, etc.

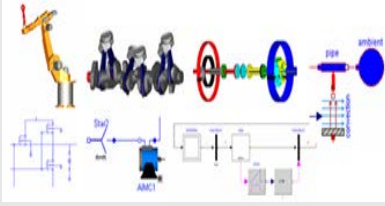


Get simulation results that depict reality and avoid expensive physical prototypes.



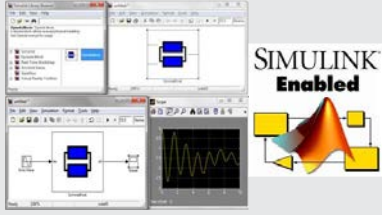
DYMOLA – LEARN BUNDLE

DYMOLA – LEARN BUNDLE



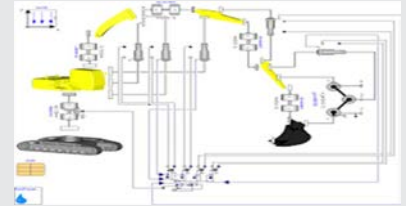
Dymola Standard Configuration with Modelica standard Libraries

A complete tool for modeling and simulation of integrated and complex systems for use within automotive, aerospace, robotics, process and other applications.



Simulink Interface

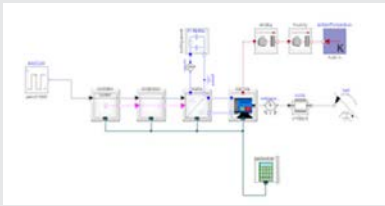
Enables easy to use integration of physical models developed in state of the art modeling tools in the MATLAB®/ Simulink environment.



Fluid Power

For the modelling hydraulic systems such as those

Found in aircraft, cars, excavators and many other types of machine.



Brushless DC Drives Library

Enables engineers to develop and quickly assess the performance of a complete electric drive, including the motor, the power electronics and the control software for speed and torque control.

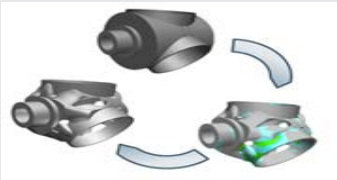


VeSyMA Library

A top-level adaptable vehicle template layout, building upon the subsystem templates established in the open-source Vehicle Interfaces library. A collection of idealised sub-component models, enabling it to be a perfect tool for conducting longitudinal vehicle based studies and drive cycle analyses.

DYMOLA – INNOVATE BUNDLE

DYMOLA – INNOVATE BUNDLE



Design Optimisation

Used to tune parameters of a device or its controller to improve system dynamics for multiple criteria and multiple cases.



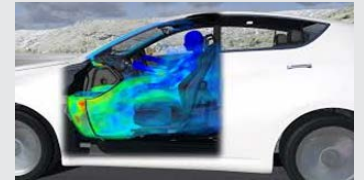
Design Optimisation

Enables the creation of complete mechanical models combining flexible structures and rigid bodies.



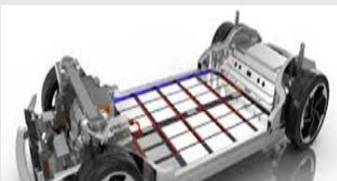
Flight Dynamics Librar

Used to construct multi-disciplinary flight dynamics models of (rigid) flight vehicles, such as transport and military aircraft, UAVs, or airships.



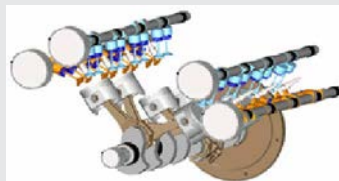
Human Comfort Library

Enables the mathematical modelling of human thermal comfort within buildings, vehicles, ships and aircraft cabins.



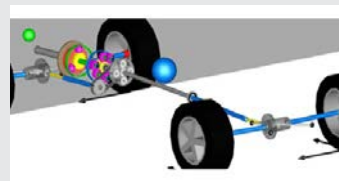
Systems Battery Library

with battery library you can measure the performance of battery systems can be calculated including thermal and aging effects.



VeSyMA Engines Library

Enables you to do the Control system development using detailed physical models of internal combustion engines.



Electrified Power Train Library

Assists the entire process of designing electrified powertrains.



Electrified Power Systems Library

Enables efficient modeling, simulation and analysis of electric power systems, including AC three-phase (abc, dq0, dq) and one-phase AC and DC systems.



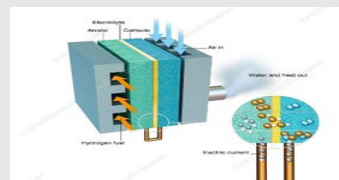
Fluid dynamics Library

For modelling hydraulic systems such as those found in aircraft, cars, excavators and many other types of machine.



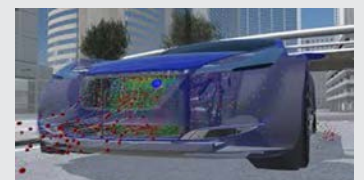
HVAC Library

allows the development and optimisation of large thermo-hydraulic Heating, Ventilation & Air Conditioning systems.



Hydrogen Library

contains components for modeling of PEM fuel cell stacks & fuel cell systems. It can be used for any fuel cell that works with pure hydrogen and moist air.



Cooling Library

For the modelling of liquid and air cooling circuits.



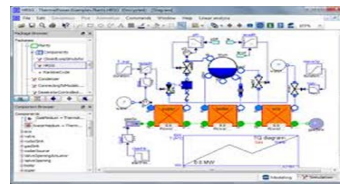
Power Wind Library

intended to aid modelling wind power plant components including generators, power electronics & auxiliary components. It is intended to study the dynamic behaviour of modern wind turbines with both generator and grid components.



Industrial Process Simulation

Application to industrial plants yield benefits, such as, correct design of modified & new plants, controller tuning and optimization, and reduced commissioning time



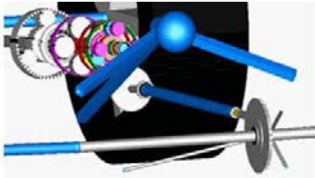
Thermal Systems Library

for modelling of thermo-fluid systems. Specific applications include: refrigeration cycles, heat pump systems, hydraulic networks, heating, ventilation & air-conditioning systems, fuel cell systems



ClaRa Plus

Create a digital twin of your power plant, investigate transient behaviour & gain greater understanding to optimise your processes for use in the future energy market.



VeSyMA Powertrain Library

Powertrain library for modelling rotating MultiBody systems, mainly automotive powertrains. It is built on the VeSyMA library & is fully compatible with the Modelica Standard and VehicleInterfaces libraries



Pneumatic Systems Library

verify and optimize the design of your complete pneumatic system from early design phases to production.



VeSyMA Suspensions Library

Optimisation and analysis of automotive and on-road vehicles, where the basic vehicle layout is that of a pair of independent linkages connected by an anti-roll bar.

Moving beyond linkages, a full vehicle dynamic analysis suite is provided by detailed road models, encompassing both high-frequency/low-amplitude road roughness and low-frequency/high-amplitude curbs. Undulations and camber are also included.

TYPICAL USE CASES



Control Systems



Power Electronics



Mechatronics



Robotics



Medical



Automotive



Image Processing



Battery Management Systems



Racing Cars



Aerospace Systems



Energy & Power



Drones

BENEFITS OF DYMOLA - ACADEMIA

- ✓ Engineering and design students want to express their talent and find the job of their dreams.
- ✓ Students also need to develop PLM skills in order to be prepared for the 21st century job market and to access the best and largest employment opportunities.



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