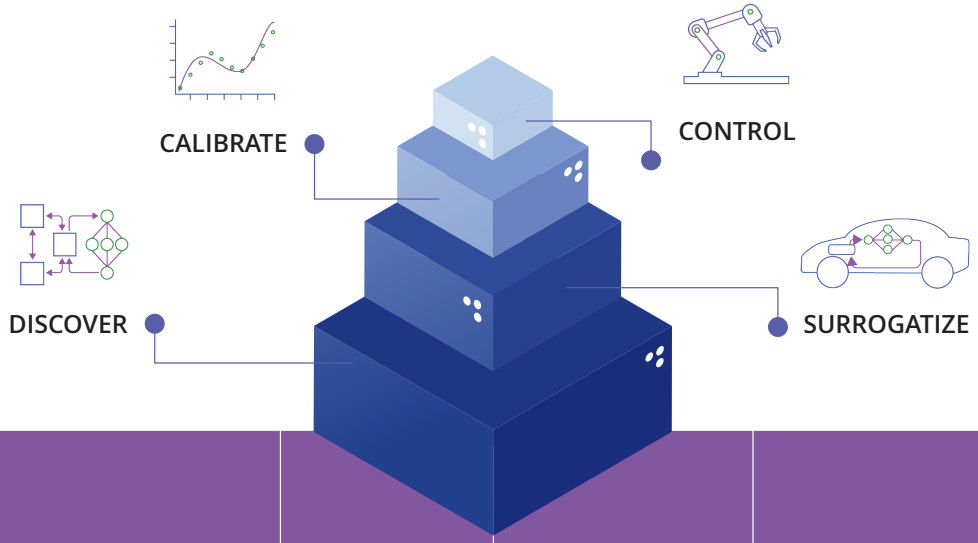
JuliaSIM

Modern Modeling and Simulation Powered by Machine Learning

JuliaSim is the next-generation, cloud-based platform for model-based design. Using modern scientific machine learning (SciML) techniques and equation-based digital twin modeling and simulation, JuliaSim can accelerate simulation by up to 500x.



ModelingToolkit.jl Standard Library | HVAC | Battery | Multibody

Design with ModelingToolkit.jl

julia SciML

JuliaHub

sales@juliahub.com www.juliahub.com

Julia SIM

JuliaSim = Science + ML

JuliaSim is machine learning done right for engineers. Mix scientific knowledge of physical and chemical processes with data to build digital twins that predict better from less data.

Precision modeling with digital twins means faster production and lower costs

Building precise and accurate models is difficult and labor-intensive with current tools. JuliaSim's unified modeling frameworks for integrating machine learning with traditional simulation in order to overcome the challenge of building predictive models. Pre-start the modeling process with our built-in libraries, use machine learning to automatically discover higher order physics, swiftly calibrate the digital twin to real-world data, use neural surrogates to accelerate the simulation, and generate highly accurate nonlinear controls for deploying on embedded devices.

Simple

Using acausal modeling and pre-made models, scientists and engineers can build realistic models in minutes.

Fast

10x to 1000x faster than other traditional products. Works seamlessly on GPUs.

Integrated Machine Learning

Use SciML methods to automate the discovery of missing physics, accelerate simulation with neural surrogates, and improve processes with deep learned controllers.

Safe

With an emphasis on uncertainty quantification, numerical stability, and robust controls, JuliaSim is the safe way to bring machine learning into real-world processes.