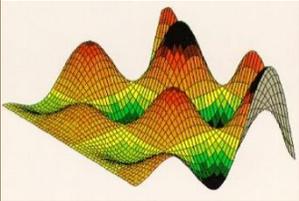


# SimWrapper

## Optimization and Analytics for Custom Simulation Models



### COMPLEX OPTIMIZATION

Solves single and multi-objective optimization problems with:

- linear and non-linear objective functions and constraints
- continuous, discrete, categorical, location, and sequencing decision variables.



### DESIGN OF EXPERIMENTS

Generates multiple standard designs (e.g., full-factorial and Latin Hypercube) and automates design execution. Also allows importing custom designs.

SimWrapper™ simulation optimization and analytics software integrates with custom simulation models, providing an intuitive, full-featured user interface to set up, execute, and analyze the results of a simulation study.

SimWrapper is a cross-platform, Java application with a plug-in interface whose architecture allows integration with existing custom simulation models with limited effort.

SimWrapper allows an analyst to choose multiple simulation inputs to vary and then apply one or more constraints and objectives. This tool uses advanced metaheuristic search methods to drive iterative simulation runs with different simulation input combinations. After the completion of the search, the tool automatically applies different statistical and data mining techniques to provide insight into the influence of the variables on the objectives and to identify good and bad regions of the tradespace. The optimization portion of SimWrapper is provided by the powerful OptQuest® engine which provides mathematical programming and metaheuristic search libraries. The analysis portion of SimWrapper is provided OptAnalysis™ which provides data mining and statistical libraries.

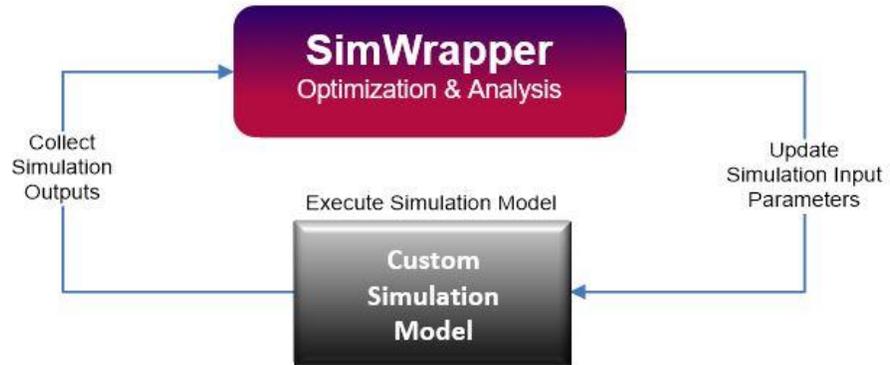
### FEATURES & CAPABILITIES

SimWrapper provides the analyst an effective tool to perform complex simulation optimization and analysis leading to more effective and efficient systems, processes, and organizations.

- SimWrapper supports optimization, experimental design, sampling, and batch runs
- Advanced 2D and 3D graphics illustrate response surfaces and Pareto frontiers (for multi-objective problems) and enhance data analysis
- World-class metaheuristic optimization techniques directly embedded in the tool
- Automated statistical analysis of simulation run results and flexible analyst-driven tools and graphics support deep understanding of results
- Flexible problem setup to define and manipulate numeric, categorical, and geospatial simulation inputs
- Native support for Monte Carlo simulations and statistical output measures
- Supports distribution of simulation runs to computing clusters for highly parallel runs
- Flexible license options are available for commercial, academic, and government use

# SimWrapper improves the affordability, effectiveness, and return on investment of your custom simulation models

## How SimWrapper Works



SimWrapper can be integrated with any custom simulation or complex model without modifications to the simulation if the following integration points are exposed:

- Model inputs can be updated
- Simulation can be executed and monitored
- Model outputs can be collected

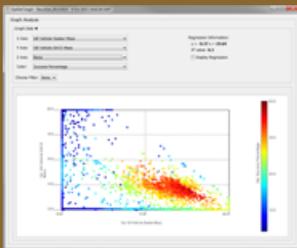
SimWrapper can wrap models written in Python, R, Java, Excel, MATLAB, VBA, and other languages and runs on Windows, Linux, or Mac. Examples are available for all of these types of models and more.

Request a trial license today at [www.opttek.com/simwrapper](http://www.opttek.com/simwrapper).

*OptTek partners with many commercial simulation software providers to embed OptQuest directly within their software package. We recommend using the embedded OptQuest capability for your optimization needs when available. Links to our current simulation software partners are available at [www.opttek.com/partners](http://www.opttek.com/partners).*

## POST-RUN ANALYSIS

Visually depicts optimization progress and simulation response surfaces while providing a statistical and data analysis toolkit to determine the simulation inputs that have the most influence on simulation outputs. This toolkit also helps the analyst identify meaningful insights from an expansive set of simulation runs.



For more information on SimWrapper or any of our products or services please visit us at: [www.opttek.com](http://www.opttek.com)

## LICENSE OPTIONS

- Perpetual licenses with optional maintenance after first year
- Annual subscription licenses with annual renewal
- Pricing details available upon request for commercial and academic licenses
- US Government use is covered under a negotiated license agreement

## SERVICES AVAILABLE

- Technical demonstration
- Installation and Setup
- Integration examples & troubleshooting
- Analyst training
- Optimization & analytic consulting
- Integration development & maintenance
- Extensive application support
- Custom research & development

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