

Contributing Utilities, Extensions, and Plugins

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Creating a Project on SimTK

The best way to host and share your OpenSim utilities and extensions is to [create a project](#) on SimTK. You can find more information about creating and managing projects on SimTK.org in the site's [user guide](#).

Developing Plugins Using the OpenSim API

OpenSim includes an application programming interface (API) that allows users to extend and adapt OpenSim functionality. In many cases, this is the easiest and quickest way for researchers to achieve their specific research goals and share their advances with others. The API provides programmatic access to the underlying computational infrastructure and algorithms employed by the graphical interface of OpenSim. This enables users with programming skills to combine existing functionality in new ways and extend the libraries of existing components of a model and add analyses by writing their own programs and OpenSim plug-ins. Plug-ins can be loaded through the graphical interface and are a convenient way of sharing technical innovations with the rest of the biomechanics community.

You can find out more information about developing a plugin in the OpenSim [Developer's Guide](#).

Once your plugin has been implemented, tested, and documented, let us know at opensim@stanford.edu and we can include your plugin in the [OpenSim Utilities Library](#).

Scripts and Other Utilities

Matlab scripts and other codes are also incredibly useful. As experienced OpenSim users know, one of the more challenging parts of modeling and simulation work is importing your experimental data. If you have developed scripts and other tools to help with this process, we encourage you to share them with others. Please email us at opensim@stanford.edu if you have utilities to share.

Examples of User Contributions

	<p>Tim Dorn from the University of Melbourne has created a project to share the OpenSim plugins and utilities that he has created for his research. You can find plugins for an induced acceleration analysis and ground reaction force decomposition at his SimTK project page.</p>
	<p>Jeff Reinbolt and his team at the University of Tennessee are developing an interface between OpenSim and the Matlab®/Simulink® package. Their project aims to combines the strengths of OpenSim (neuromusculoskeletal dynamics) with the strengths of Simulink® (rapid model-based design, control systems, and numerical simulation) of each individual software package.</p>