

Resource Summary Report

Generated by [PRECISE-TBI](#) on Aug 1, 2026

Simbody(tm): SimTK Multibody Dynamics Toolset

RRID:SCR_002684

Type: Tool

Proper Citation

Simbody(tm): SimTK Multibody Dynamics Toolset (RRID:SCR_002684)

Resource Information

URL: <https://simtk.org/home/simbody>

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Description: This project is a SimTK Core toolset providing general multibody dynamics capability, i.e., the capability to solve Newton's 2nd law $F=ma$ in any set of coordinates. The techniques of rigid body mechanics are used to provide results in $O(n)$ time for any set of n coordinates. This can be used for internal coordinate modeling of molecules, or for coarse-grained models based on larger chunks. It is also useful for large-scale mechanical models, such as neuromuscular models of human gait. Simbody is provided as an open source, object-oriented C++ API and delivers high-performance, accuracy-controlled science/engineering-quality results. Binaries of this software are bundled with other SimTK Core modules.

Synonyms: Simbody

Resource Type: software resource, software application, simulation software

Defining Citation: [PMID:25866705](#)

Keywords: articulated body, coarse-grained molecule modeling, constrained motion, internal coordinates, mechanical simulation, mechanics, molecular dynamics, multibody dynamics, rigid body, simtk core, skeletal mechanics, torsion coordinates

Availability: Free, Available for download, Freely available

Resource Name: Simbody(tm): SimTK Multibody Dynamics Toolset

Resource ID: SCR_002684

Alternate IDs: nif-0000-23309

Record Creation Time: 20220129T080214+0000

Record Last Update: 20260801T042520+0000

Ratings and Alerts

No rating or validation information has been found for Simbody(tm): SimTK Multibody Dynamics Toolset.

No alerts have been found for Simbody(tm): SimTK Multibody Dynamics Toolset.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

Chatzipapas KP, et al. (2020) Ionizing Radiation and Complex DNA Damage: Quantifying the Radiobiological Damage Using Monte Carlo Simulations. Cancers, 12(4).