

Resource Summary Report

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SCIRun

RRID:SCR_002541

Type: Tool

Proper Citation

SCIRun (RRID:SCR_002541)

Resource Information

URL: <http://www.sci.utah.edu/cibc-software/scirun.html>

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Description: A Problem Solving Environment (PSE) for modeling, simulation and visualization of scientific problems. SCIRun now includes the biomedical components formally released as BioPSE, as well as BioMesh3D. BioMesh3D is a free, easy to use program for generating quality meshes for the use in biological simulations. The most recent stable release is version 4.6.

Abbreviations: SCIRun

Resource Type: simulation software, data processing software, software application, software toolkit, data visualization software, software resource

Keywords: modeling, simulation, visualization

Funding: NCRR 5P41RR012553-15;
NIGMS 8 P41 GM103545-15

Availability: Free, Available for download, Freely available

Resource Name: SCIRun

Resource ID: SCR_002541

Alternate IDs: nlx_155949

Alternate URLs: <http://www.nitrc.org/projects/scirun>

License: MIT License

Record Creation Time: 20220129T080214+0000

Record Last Update: 20260810T040336+0000

Ratings and Alerts

No rating or validation information has been found for SCIRun.

No alerts have been found for SCIRun.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 22 mentions in open access literature.

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

Akbar MN, et al. (2024) M2M-InvNet: Human Motor Cortex Mapping From Multi-Muscle Response Using TMS and Generative 3D Convolutional Network. IEEE transactions on neural systems and rehabilitation engineering : a publication of the IEEE Engineering in Medicine and Biology Society, 32, 1455.

Segar DJ, et al. (2023) Modeling of intracranial tumor treating fields for the treatment of complex high-grade gliomas. Scientific reports, 13(1), 1636.

Jawad T, et al. (2023) Selective peripheral nerve recording using simulated human median nerve activity and convolutional neural networks. Biomedical engineering online, 22(1), 118.

Bear LR, et al. (2023) Investigation into the importance of using natural PVCs and pathological models for potential-based ECGI validation. Frontiers in physiology, 14, 1198002.

Bhat VR, et al. (2022) Localization of magnetocardiographic sources for myocardial infarction cases using deterministic and Bayesian approaches. Scientific reports, 12(1), 22079.

Wang KM, et al. (2022) Technical note: Evaluation of a silicone-based custom bolus for radiation therapy of a superficial pelvic tumor. Journal of applied clinical medical physics, 23(4), e13538.

Beynel L, et al. (2021) Network-based rTMS to modulate working memory: The difficult choice of effective parameters for online interventions. Brain and behavior, 11(11), e2361.

Gomez LJ, et al. (2021) Fast computational optimization of TMS coil placement for individualized electric field targeting. NeuroImage, 228, 117696.

Huang WA, et al. (2021) Transcranial alternating current stimulation entrains alpha oscillations by preferential phase synchronization of fast-spiking cortical neurons to stimulation waveform. Nature communications, 12(1), 3151.

Sabel BA, et al. (2021) Evaluating Current Density Modeling of Non-Invasive Eye and Brain Electrical Stimulation Using Phosphene Thresholds. *IEEE transactions on neural systems and rehabilitation engineering : a publication of the IEEE Engineering in Medicine and Biology Society*, 29, 2133.

Charlebois CM, et al. (2021) Validating Patient-Specific Finite Element Models of Direct Electrocortical Stimulation. *Frontiers in neuroscience*, 15, 691701.

Sammut S, et al. (2021) Compensation Strategies for Bioelectric Signal Changes in Chronic Selective Nerve Cuff Recordings: A Simulation Study. *Sensors (Basel, Switzerland)*, 21(2).

Boonzaier J, et al. (2020) Design and Evaluation of a Rodent-Specific Transcranial Magnetic Stimulation Coil: An In Silico and In Vivo Validation Study. *Neuromodulation : journal of the International Neuromodulation Society*, 23(3), 324.

Perez-Alday EA, et al. (2020) Mechanisms of Arrhythmogenicity in Hypertrophic Cardiomyopathy: Insight From Non-invasive Electrocardiographic Imaging. *Frontiers in physiology*, 11, 344.

Duffley G, et al. (2019) Evaluation of methodologies for computing the deep brain stimulation volume of tissue activated. *Journal of neural engineering*, 16(6), 066024.

Rampersad S, et al. (2019) Prospects for transcranial temporal interference stimulation in humans: A computational study. *NeuroImage*, 202, 116124.

Anderson DN, et al. (2019) The ??DBS: Multiresolution, Directional Deep Brain Stimulation for Improved Targeting of Small Diameter Fibers. *Frontiers in neuroscience*, 13, 1152.

Johnson KA, et al. (2019) Image-based analysis and long-term clinical outcomes of deep brain stimulation for Tourette syndrome: a multisite study. *Journal of neurology, neurosurgery, and psychiatry*, 90(10), 1078.

Tate J, et al. (2018) Reducing Error in ECG Forward Simulations With Improved Source Sampling. *Frontiers in physiology*, 9, 1304.

Gall C, et al. (2016) Alternating Current Stimulation for Vision Restoration after Optic Nerve Damage: A Randomized Clinical Trial. *PloS one*, 11(6), e0156134.