Resource Summary Report

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CUDA-SPHERE-FWD-MEEG

RRID:SCR_013225
Type: Tool

Proper Citation

CUDA-SPHERE-FWD-MEEG (RRID:SCR_013225)

Resource Information

URL: http://sourceforge.net/projects/cudasphere/

Proper Citation: CUDA-SPHERE-FWD-MEEG (RRID:SCR_013225)

Description: A CUDA C based toolkit which provides a GPU based implementation of the spherical model forward solution for the 306 channel Elekta Neuromag MEG system and the EEG. The 1-Sphere forward solution for the MEG and the 4-Sphere forward solution for the EEG is implemented in CUDA C and an accelerated solution is obtained using the NVIDIA GPU when the solution is calculated for a large number of dipoles (on the order of 15000 and above) and sensor location. Speedup by a factor of 22 and 32 is obtained for the EEG and MEG solution respectively when compared to the fastest CPU implementation available in the public domain. The complete source code and pre-compiled binaries are also made available via an open source license (GPL Version 3). A CUDA enabled NVIDIA graphics card is required to use the software.

Abbreviations: CUDA-SPHERE-FWD-MEEG

Synonyms: CUDA accelerated spherical model M/EEG, CUDA accelerated spherical model forward solution for EEG/MEG

Resource Type: software resource, software toolkit

Keywords: eeg, meg, electrocorticography, eeg modeling, forward - inverse, meg modeling, modeling

Availability: GNU General Public License v3

Resource Name: CUDA-SPHERE-FWD-MEEG

Resource ID: SCR_013225

Alternate IDs: nlx_155725

Alternate URLs: http://www.nitrc.org/projects/cuda_sphere_fwd

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Ratings and Alerts

No rating or validation information has been found for CUDA-SPHERE-FWD-MEEG.

No alerts have been found for CUDA-SPHERE-FWD-MEEG.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We have not found any literature mentions for this resource.