

Resource Summary Report

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DIADEM Challenge: Digital reconstruction of Axonal and DEndritic Morphology (DIADEM) Software Development Competition

RRID:SCR_008262

Type: Tool

Proper Citation

DIADEM Challenge: Digital reconstruction of Axonal and DEndritic Morphology (DIADEM) Software Development Competition (RRID:SCR_008262)

Resource Information

URL: http://diademchallenge.org/data_sets.html

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Description: A software development competition, the DIADEM Challenge, to benefit the scientific community by encouraging the development of better software for automating three-dimensional reconstructions of neuronal arbors. The intent of the Sponsors is to ensure that the best software submitted for the competition is made available to the scientific community within a reasonable time and on reasonable terms. No purchase is necessary to enter or win. The competition will have two rounds. As of April 10, 2009, individuals and teams may register to participate in the competition and may download sets of image stacks (Data Sets) of non-human animal brains along with three-dimensional reconstructions for some of these Data Sets for training purposes. Submissions of software, including executable programs, supporting documentation, and reconstruction files for the Data Sets, must be uploaded to the competition website no later than April 9, 2010. In order to be eligible to win the competition, the individuals and at least one member of any teams whose submissions are selected for the Final Round (Finalists) must participate in the Final Round and scientific conference. Personal participation in the Final Round and scientific conference is important for two main reasons: first, because the Finalists software will be tested at the Final Round against additional Data Sets so that the judges can select a winner or winners, and second, because the larger scientific conference, of which the Final Round will be a part, is intended to foster extensive scientific interaction among neuroscientists and computational scientists, including plenary and poster sessions to discuss challenges, solutions, and future directions. There are 5 datasets, all of which have to be reconstructed for the qualifier phase. Once you have registered your group, dataset download information will be sent to you via E-mail. The 5 datasets are: - Cerebellar Climbing Fibers - Hippocampal

CA3 Interneuron - Neocortical Layer 6 Axons - Neuromuscular Projection Fibers - Olfactory Projection Fibers Sponsors: The sponsors of this competition are: Allen Institute for Brain Science, Seattle, Washington; Howard Hughes Medical Institute (HHMI), Chevy Chase, Maryland; and Krasnow Institute for Advanced Study, George Mason University, Fairfax, Virginia.

Synonyms: DIADAM Challenge

Resource Type: portal, topical portal, training resource, challenge, meeting resource, data or information resource

Keywords: fiber, animal, automating, axon, axonal, brain, cerebellar, challenge, competition, computational, conference, data set, dendritic, development, hippocampal, interneuron, morphology, neocortical, neuromuscular, neuronal, neuroscientist, non-human, olfactory, program, reconstruction, scientific conference, scientist, software, three-dimensional, image

Resource Name: DIADEM Challenge: Digital reconstruction of Axonal and DEndritic Morphology (DIADEM) Software Development Competition

Resource ID: SCR_008262

Alternate IDs: nif-0000-23194

Record Creation Time: 20220129T080246+0000

Record Last Update: 20260805T044205+0000

Ratings and Alerts

No rating or validation information has been found for DIADEM Challenge: Digital reconstruction of Axonal and DEndritic Morphology (DIADEM) Software Development Competition.

No alerts have been found for DIADEM Challenge: Digital reconstruction of Axonal and DEndritic Morphology (DIADEM) Software Development Competition.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 4 mentions in open access literature.

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

Tecuatl C, et al. (2024) Accelerating the continuous community sharing of digital neuromorphology data. FASEB bioAdvances, 6(7), 207.

Nanda S, et al. (2015) Doubling up on the fly: NeuroMorpho.Org Meets Big Data. *Neuroinformatics*, 13(1), 127.

Santamaría-Pang A, et al. (2015) Automatic Morphological Reconstruction of Neurons from Multiphoton and Confocal Microscopy Images Using 3D Tubular Models. *Neuroinformatics*, 13(3), 297.

Jiménez D, et al. (2015) Improved automatic centerline tracing for dendritic and axonal structures. *Neuroinformatics*, 13(2), 227.