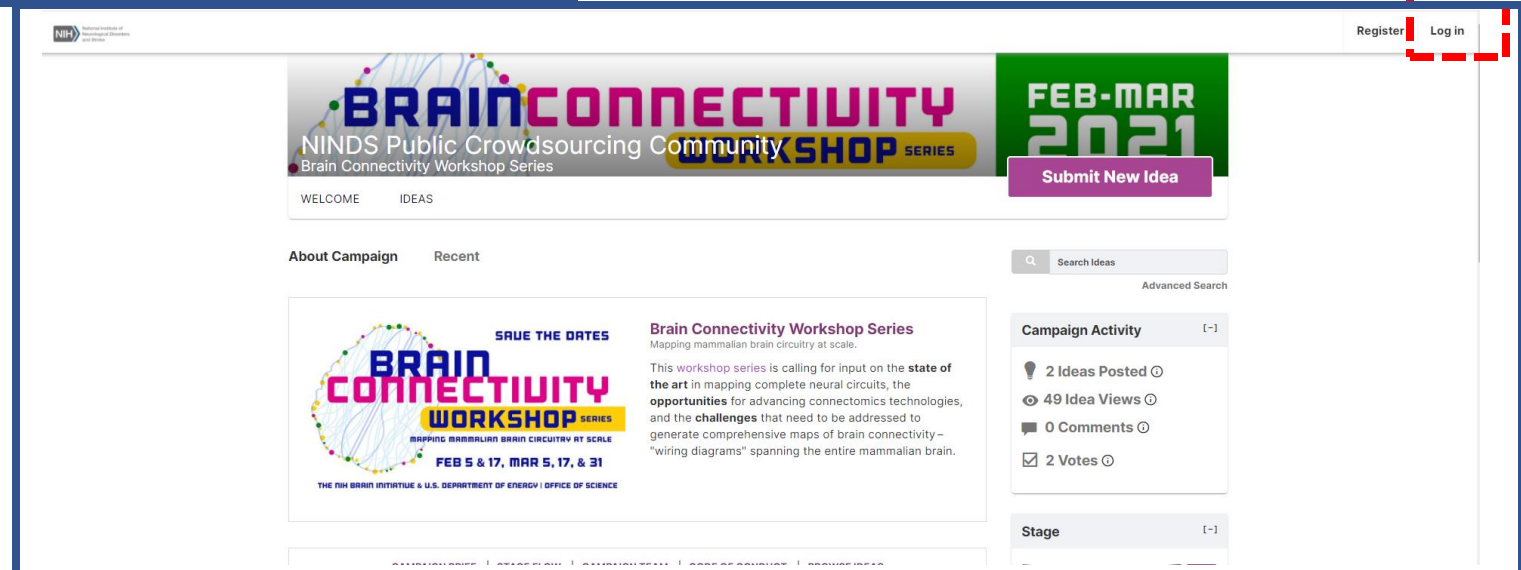
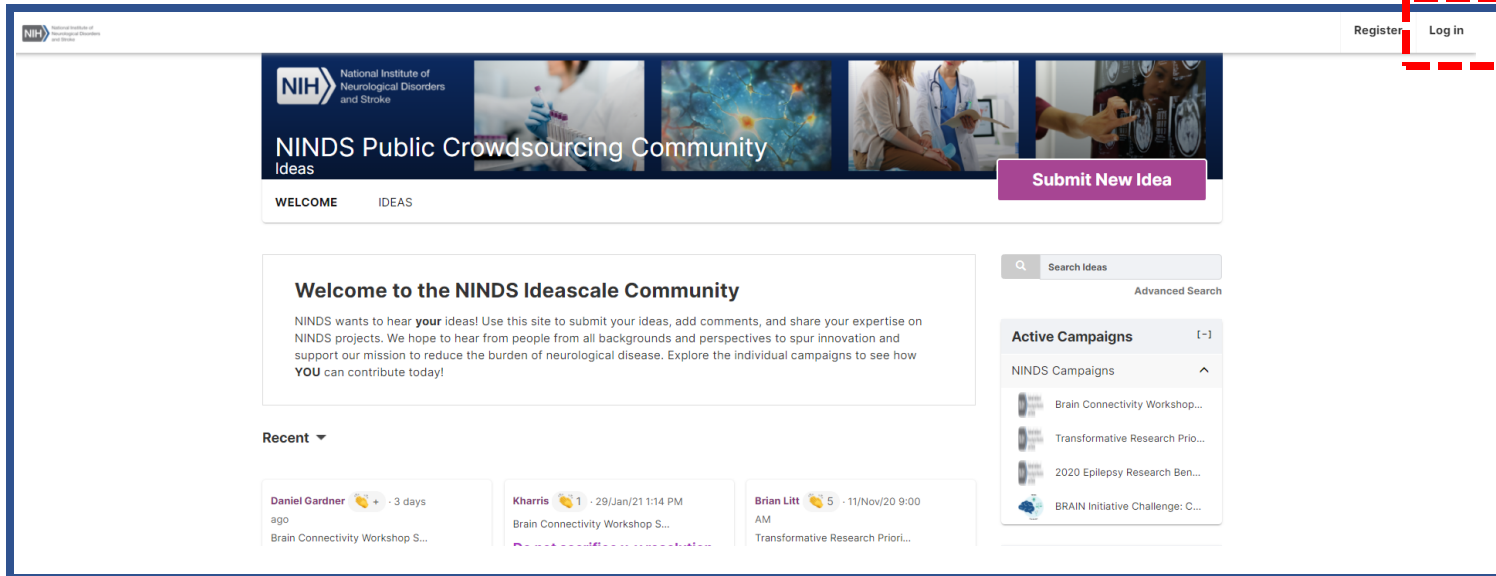


IDEASCALE: IDEA SUBMISSION

Begin by logging into main [NINDS IdeaScale](#) community page (top) or the [Brain Connectivity Workshop](#) campaign page (bottom)



If you have forgotten your login information, follow the on-screen prompts for recovery.

From the main [NINDS IdeaScale](#) community page,
click on the Brain Connectivity Workshop campaign link.

The screenshot displays the NINDS IdeaScale community page. At the top, the NIH logo and "NINDS Public Crowdsourcing Community" are visible, along with a "Submit New Idea" button. Below the header, there are tabs for "Recent" and "My Ideas". The main content area shows three idea cards. The first card, by Daniel Gardner, is titled "Has evolution conserved canonical computing microcircuitry?". The second card, by Kharris, is titled "Do not sacrifice x-y resolution for isovoxels" and is highlighted with a red dashed box and a red arrow. The third card, by Brian Litt, is titled "Collaborative Tech for Epilepsy Surgery, Devices and Therapies". On the right side, there is a search bar and a section titled "Active Campaigns" which lists several campaigns, including "Brain Connectivity Workshop...". Below this is a "Community Kudos" section showing user interactions.

NIH National Institute of Neurological Disorders and Stroke

NINDS Public Crowdsourcing Community
Browse Recent ideas

WELCOME IDEAS

Recent My Ideas

Search Ideas

Advanced Search

Active Campaigns [-]

NINDS Campaigns ^

Brain Connectivity Workshop...

Transformative Research Prio...

2020 Epilepsy Research Ben...

BRAIN Initiative Challenge: C...

Community Kudos ⓘ [-]

Kim Nye received from ttkummer

AES received from johnlamuth

kharris received from Davi Bock

vio.h received from

You will be directed to the Workshop IdeaScale campaign page.

From the [Brain Connectivity Workshop](#) campaign page, click the “[Submit New Idea](#)” button.

The screenshot shows the 'Brain Connectivity Workshop' campaign page. At the top, there's a banner with the title 'BRAIN CONNECTIVITY WORKSHOP SERIES' and 'NINDS Public Crowdsourcing Community'. Below the banner, there are navigation links: 'WELCOME' and 'IDEAS'. On the right side of the banner, there's a green box with 'FEB-MAR 2021' and a purple button labeled 'Submit New Idea'. A red dashed box highlights this button, and a red arrow points to it from the right. Below the banner, there are tabs for 'About Campaign', 'Recent', and 'My Ideas'. The 'About Campaign' tab is selected. The main content area features a large graphic with the workshop title and dates 'FEB 5 & 17, MAR 5, 17, & 31'. To the right of the graphic, there's a section titled 'Brain Connectivity Workshop Series' with a description and links to 'Browse Ideas' and 'Unsubscribe from Campaign'. On the right side of the page, there's a sidebar with a search bar, a 'Campaign Activity' section showing '2 Ideas Posted', '49 Idea Views', '0 Comments', and '2 Votes', a 'Stage' section showing 'ALL STAGES' and 'IDEATE', and an 'Active Campaigns' section.

BRAIN CONNECTIVITY WORKSHOP SERIES
NINDS Public Crowdsourcing Community
Brain Connectivity Workshop Series

WELCOME IDEAS

Submit New Idea

About Campaign Recent My Ideas

SAVE THE DATES
BRAIN CONNECTIVITY WORKSHOP SERIES
MAPPING MAMMALIAN BRAIN CIRCUITRY AT SCALE
FEB 5 & 17, MAR 5, 17, & 31
THE NIH BRAIN INITIATIVE & U.S. DEPARTMENT OF ENERGY | OFFICE OF SCIENCE

Brain Connectivity Workshop Series
Mapping mammalian brain circuitry at scale.

[Browse Ideas](#) [Unsubscribe from Campaign](#)

This **workshop series** is calling for input on the **state of the art** in mapping complete neural circuits, the **opportunities** for advancing connectomics technologies, and the **challenges** that need to be addressed to generate comprehensive maps of brain connectivity – “wiring diagrams” spanning the entire mammalian brain.

CAMPAIGN BRIEF | STAGE FLOW | CAMPAIGN TEAM | CODE OF CONDUCT | BROWSE IDEAS

Campaign Brief

This series of five workshops, co-hosted by the **National Institutes of Health (NIH) BRAIN Initiative** and the **Department of Energy (DOE) Office of Science**, brings together researchers with broad expertise to discuss current approaches to mapping brain microconnectivity, potential for technical advances in connectomics, and obstacles that may impede progress in mapping the mammalian brain at scale. For more information on individual

Search Ideas
Advanced Search

Campaign Activity [–]

💡 2 Ideas Posted ⓘ
👁️ 49 Idea Views ⓘ
💬 0 Comments ⓘ
✅ 2 Votes ⓘ

Stage [–]

ALL STAGES 2
IDEATE 2

Active Campaigns [–]

You will be directed to the Idea Submission Form.

Alternatively, from the main [NINDS IdeaScale](#) community page, click on the "[Submit New Idea](#)" button.

The screenshot shows the NINDS Public Crowdsourcing Community interface. At the top, there's a header with the NIH logo and the text "NINDS Public Crowdsourcing Community". Below this, there's a navigation bar with "WELCOME" and "IDEAS". A red dashed box highlights the "Submit New Idea" button, which is a purple rectangle with white text. A red arrow points to this button from the right. Below the navigation bar, there's a section for "Recent" and "My Ideas". The "Recent" section displays three idea cards. The first card is by Daniel Gardner, titled "Has evolution conserved canonical computing microcircuitry?". The second card is by Kharris, titled "Do not sacrifice x-y resolution for isovoxels". The third card is by Brian Litt, titled "Collaborative Tech for Epilepsy Surgery, Devices and Therapies". To the right of the idea cards, there's a search bar labeled "Search Ideas" and a link to "Advanced Search". Below the search bar, there's a section for "Active Campaigns" and a section for "Community Kudos".

NINDS Public Crowdsourcing Community

WELCOME IDEAS

Submit New Idea

Recent My Ideas

Search Ideas

Advanced Search

Active Campaigns

Community Kudos

You will be directed to the Idea Submission Form.

Verify that the campaign is set to the “Brain Connectivity Workshop Series”.

WELCOME IDEAS

Submit Your Idea

0 Drafts ▾

The **Brain Connectivity Workshop Series**, co-hosted by **The National Institutes of Health (NIH) BRAIN Initiative** and the **Department of Energy (DOE) Office of Science**, aims to bring together researchers with broad expertise to discuss current approaches to mapping brain microconnectivity, potential for technical advances in connectomics, and obstacles that may impede progress toward mapping the mammalian brain at scale. For more information on individual Workshop agendas, meeting registration, and IdeaScale tutorials, please see the meeting website: <https://brainconnectivityseries.com/>

We are seeking input from experts in brain connectomics and other key stakeholders including researchers in academia and industry; clinicians, scientific societies and advocacy organizations; and interested members of the public. We want to hear your view on the **significance** of mapping mammalian brain circuitry in detail, as well as your feedback and ideas on the **state of the art** in mapping complete neural circuits, the current **opportunities** for advancing connectomics technologies, and the **challenges** that need to be addressed to generate comprehensive maps of brain connectivity.

Responses to the workshop questions are voluntary and, if preferred, may be submitted anonymously via brainconnectivityseries@nih.gov. Please do not include any information that you do not wish to make public. Proprietary, classified, confidential, or sensitive information should not be included in your response.

We invite you to join in on the conversation and to check in over the course of the Series as the discussions evolve!

*Required fields

Campaign* ✓ Completed: Required Field 1 of 5

Brain Connectivity Workshop Series ▾

Choose a question*

- ▾

Choose 1 or more theme(s) *

+ Significance + State of the Art + Opportunity + Challenge + Other

Response Title*

84 characters left in Response Title field

At the top of the form, you will find a description of the Workshop series and instructions for this Idea Submission Form.

From the dropdown menu, select a question you would like to respond to.

*Required fields

Campaign* ✓ Completed: Required Field 1 of 5

Brain Connectivity Workshop Series

Choose a question *

Choose 1 or more theme(s) *

+ Significance + State of the Art + Opportunity + Challenge + Other

Response Title*

64 characters left in Response Title field

Response *

Attach an image or supporting document (Optional)

Browse File or Drag & Drop

Maximum upload size 25 MB

Hyperlinks to existing research related to this idea



*Required fields

Campaign* ✓ Completed: Required Field 1 of 5

Brain Connectivity Workshop Series

Choose a question *

Workshop 1: Significance of mapping complete neural circuits

1a) What issues would you be able to address if you had detailed connectome data that cannot currently be investigated?

1b) Are there conceptual issues that would be approached entirely differently if detailed connectomic data were available?

1c) What would be the value added between having one versus many samples (e.g., individuals, conditions, species)?

Workshop 2: Sample preparation in mammalian whole-brain connectomics

2a) What are key issues to be resolved in sample preparation for whole mouse brain EM connectomes in conjunction with different imaging platforms?

2b) What key issues do you feel must be resolved in sample preparation using complementary imaging at lower resolution in mouse brains and larger brains?

2c) What are the limitations, potentials and greatest opportunities in moving to larger brains?

Workshop 3: Experimental modalities for whole-brain connectivity mapping

3a) In your opinion, what resolution is required to attain meaningful wiring models?

3b) Given the wide variety of imaging technologies currently available, which technologies could be driven to scale and most easily disseminated?

3c) What would be the most optimal way to encode dynamics in static brain maps?

Workshop 4: Connectome generation and data pipelines

4a) What are the prospects and challenges you see in scaling analysis goals to volumes comprising hundreds of petavoxels of imaging data?

4b) What kinds of improvements in technical infrastructure (hardware and/or software) would most dramatically aid in scaling analysis?

4c) What new frontiers of analysis enabled by a whole mammalian connectome excite you most? What challenges do you see in pursuing those frontiers?

Workshop 5: Optimizing the use of connectomic data to drive data science and scientific discovery

5a) What new types of analyses (not developed yet) are needed to make progress and enable scientific breakthroughs?

5b) What would be the most optimal way to integrate analyses across scales? Or connectomic data with functional data?

5c) What is needed to make meaningful comparisons between connectomes? Or to make connectomic data and analyses widely available?

Open Discussion

If the question you would like to address is not listed, select the option to “engage the community with your own topic”.

Proceed to fill out the rest of the form, with *required* elements denoted by *

1) Select a theme to help categorize your Idea

2) Create a clear and concise title that engages other users.

3) Describe your idea for others to view and discuss.

*Required fields

Campaign* ✓ Completed: Required Field 1 of 5

Brain Connectivity Workshop Series

Choose a question* ✓ Completed: Required Field 2 of 5

1c) What would be the value added between having one versus many samples (e.g., individuals, conditions, species)?

Choose 1 or more theme(s)*

+ Significance

+ State of the Art

+ Opportunity

+ Challenge

+ Other

Response Title*

64 characters left in Response Title field

Response*



A

If you would like to provide additional information, you can use the *optional* fields at the bottom.

You can attach a file that adds to your Idea and its discussion.

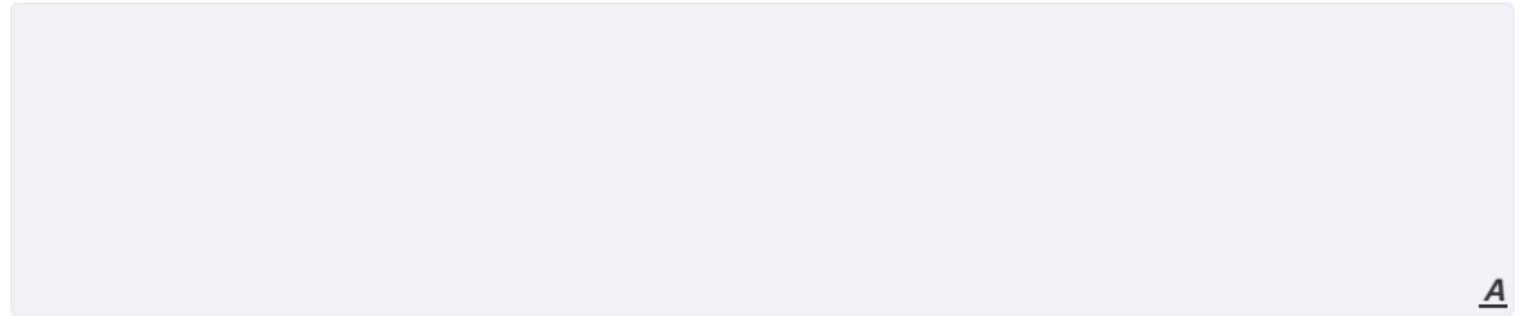
Attach an image or supporting document (Optional)

 Browse File or Drag & Drop

Maximum upload size 25 MB

You can also paste in URLs to publications and other supporting material.

Hyperlinks to existing research related to this idea

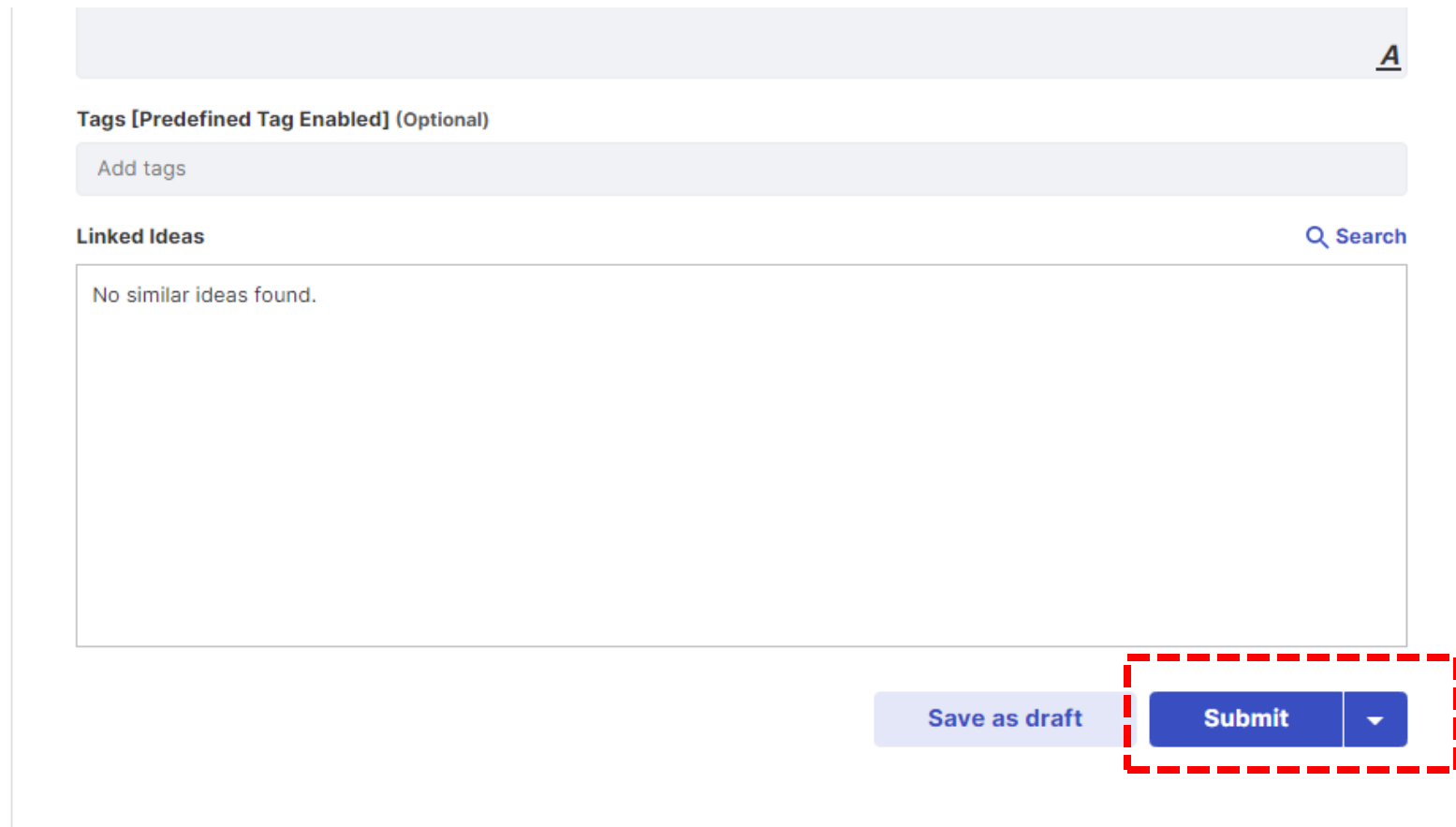
A large, light gray rectangular text area for pasting URLs. A small blue underlined 'A' icon is visible in the bottom right corner.

You can add tags to your Idea to help others find it easier.

Tags [Predefined Tag Enabled] (Optional)

Add tags

Complete your Idea submission by clicking the “Submit” button at the bottom of the form.



The screenshot shows a form for submitting an idea. At the top is a large text input field with a placeholder 'A' and a subscript '2' icon. Below this is a section titled 'Tags [Predefined Tag Enabled] (Optional)' with a text input field containing 'Add tags'. Underneath is a 'Linked Ideas' section with a search bar labeled 'Search' and a message 'No similar ideas found.' At the bottom right of the form, there are two buttons: 'Save as draft' and 'Submit'. The 'Submit' button is highlighted with a red dashed rectangular box, and a red arrow points to it from the right.

You can also “Save as a draft” and submit your Idea later.

Following approval by the moderators, your Idea will appear on the [Workshop campaign page](#).

BRAINCONNECTIVITY
NINDS Public Crowdsourcing Community
Brain Connectivity Workshop Series

WELCOME IDEAS

Submit New Idea

ABOUT CAMPAIGN

Recent My Ideas

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SAVE THE DATES
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Brain Connectivity Workshop Series
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Browse Ideas Unsubscribe from Campaign

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CAMPAIGN BRIEF | STAGE FLOW | CAMPAIGN TEAM | CODE OF CONDUCT | BROWSE IDEAS

Campaign Activity [-]

- 2 Ideas Posted
- 49 Idea Views
- 0 Comments
- 2 Votes

Stage [-]

ALL STAGES 2

BRAINCONNECTIVITY
NINDS Public Crowdsourcing Community
Brain Connectivity Workshop Series

WELCOME IDEAS

Submit New Idea

ABOUT CAMPAIGN Recent My Ideas

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Advanced Search

Campaign Activity [-]

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- 0 Comments
- 2 Votes

Campaign Team

Stage [-]

ALL STAGES 2

Daniel Gardner 3 days ago

Brain Connectivity Workshop S...

Has evolution conserved canonical computing microcircuitry?

Has evolution conserved microcircuitry that performs a small number of identifiable, verifiable canonical computations?

If so, connectomes can add value not by their completeness, but by their presentation of motifs which can be categorized as one of a number of basis functions. In spite of the ongoing, global, development of connectomes, we incompletely understand these general and reductionist questions:

Kharris 1 · 29/Jan/21 1:14 PM

Brain Connectivity Workshop S...

Do not sacrifice x-y resolution for isovoxels

As a Co-lead for this workshop series, I am entering an example topic for discussion here.

The idea to explore is what is the minimum z-resolution needed to capture and distinguish small ultrastructure objects (e.g. gap junctions, microtubules, neurofilaments, vesicles, polyribosomes, extracellular space, spine apparatus substructure, astroglial end processes, etc.) without overlap between objects across z. We want to...

more »

You can check these pages over the course of the Workshop Series to see the discussion unfold!

Welcome to the NINDS Ideascale Community

NINDS wants to hear **your** ideas! Use this site to submit your ideas, add comments, and share your expertise on NINDS projects. We hope to hear from people from all backgrounds and perspectives to spur innovation and support our mission to reduce the burden of neurological disease. Explore the individual campaigns to see how **YOU** can contribute today!

Recent ▾

Brian Lim 🏆 5 · 15Nov/20 9:00 AM

AM

Transformative Research Prio...

Collaborative Tech for Epilepsy Surgery, Devices and Therapies



We propose a bold initiative to share data, infrastructure, new technologies and methods across centers to tackle some of the major challenges in treating refractory epilepsy. There is a clear gap between recent advances in technology to treat refractory seizures and their clinical translation. This is largely because individual centers do not have a sufficient number of patients or technical know-how to do the statistically... [more](#) >

Kim Nye 🏆 2 · 31Oct/20 3:11 AM

AM

Transformative Research Prio...

Parents driving precision therapies for genetic epilepsies

Some of the greatest progress right now in precision therapies for genetic epilepsies is the result of parents of children with genetic epilepsies forming nonprofit organizations. These non-profits then raise funds for medical research. These organizations understand the urgency of the situation and they drive progress by being laser-focused on a specific genetic epilepsy. These genetic epilepsies are arguably among the... [more](#) >

epilepsy

precision

models

Yves DuBois 🏆 1 · 30Oct/20

6:23 PM

2020 Epilepsy Research Ben...

No Time to Spare: Re-envisioning ASM Selection in DEEs

We need a better protocols for tailoring anti-seizure medication (ASM) regimes or surgical treatment options for our children, especially the early-onset, drug-resistant epilepsies (ORE) within the DEE families - one that acts with urgency to define the best treatment available in an individualized plan based on the knowledge of the diagnosis, the types of seizures, and the values of the child and family. Yes, please... [more](#) >



Search Ideas

Advanced Search

Active Campaigns

[~]

NINDS Campaigns

^



Transformative Research Prio...



2020 Epilepsy Research Ben...



BRAIN Initiative Challenge: C...

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If you have any issues or questions, you can contact the NINDS IdeaScale support team using the e-mail address provided on the website.