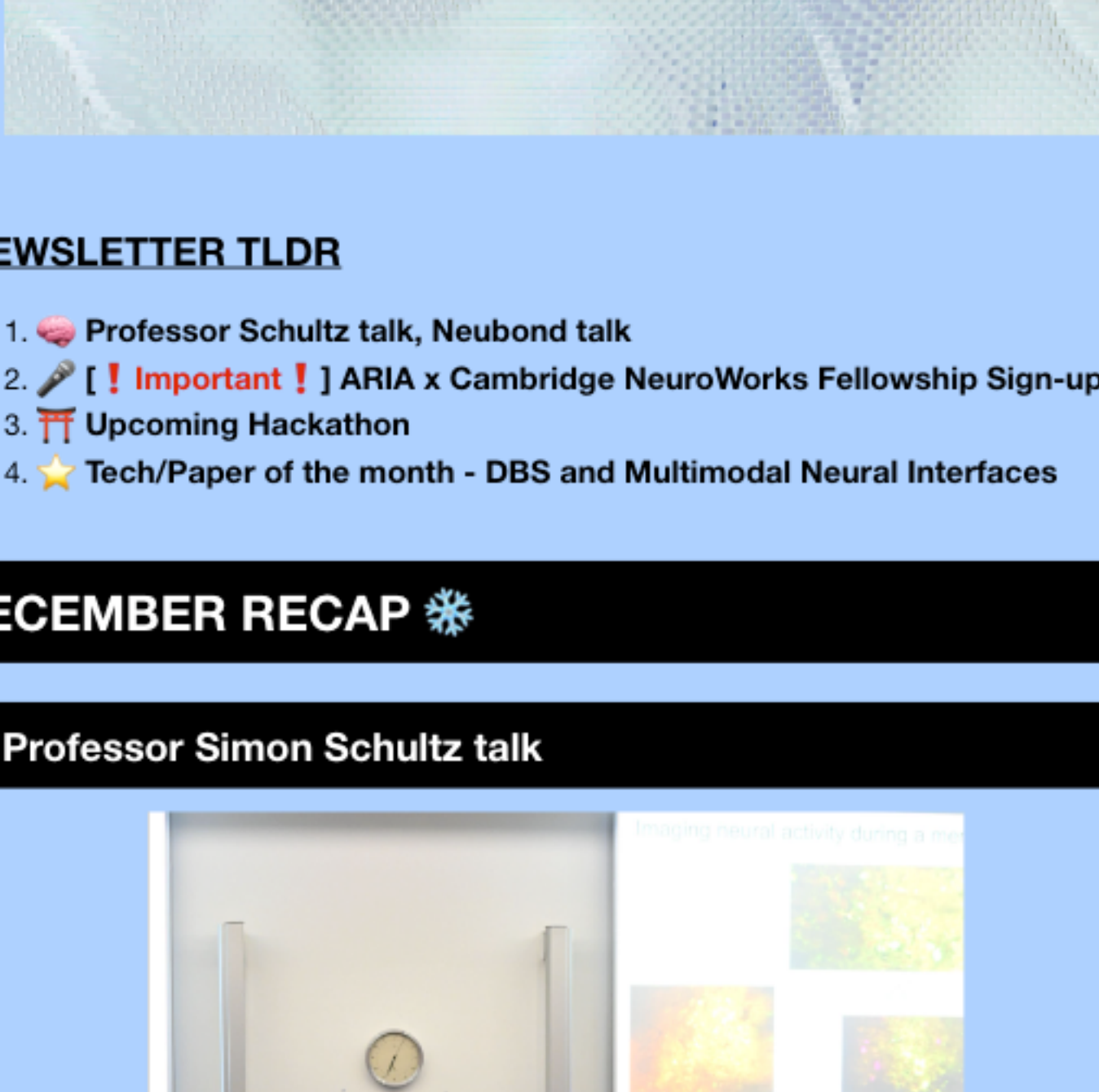




# ICL Neurotech Monthly Newsletter

ISSUE 4. JANUARY 2025



## NEWSLETTER TLDR

- 🧠 **Professor Schultz talk, Neubond talk**
- 🔧 [ ! Important ! ] **ARIA x Cambridge NeuroWorks Fellowship Sign-up**
- 🔧 **Upcoming Hackathon**
- 🌟 **Tech/Paper of the month - DBS and Multimodal Neural Interfaces**

## DECEMBER RECAP ❄️

### 1. Professor Simon Schultz talk

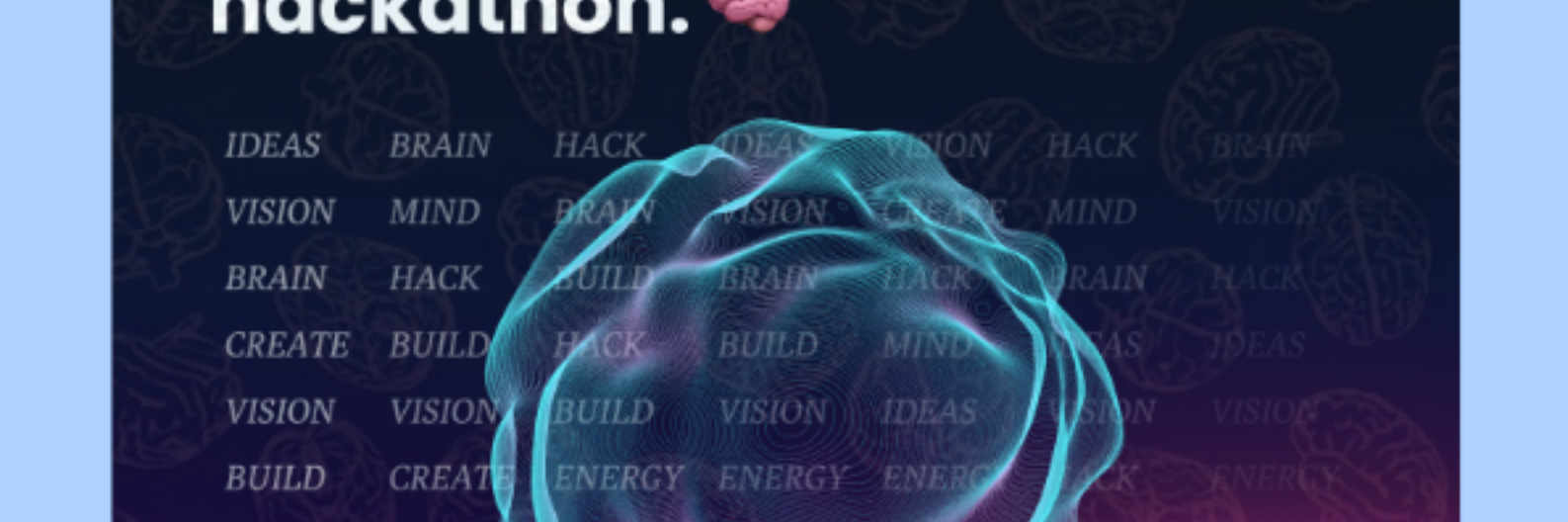


On 5th of December 2024, **Professor Simon Schultz** from Centre for Neurotechnology at Imperial took us through his groundbreaking research on **optical neurotechnology**, using light and viruses to measure brain function. We were mesmerised by fascinating neural visualisation techniques used in his lab such as optogenetics, fluorescence imaging, 2-photon mesocope, and mesoscopic multiphoton imaging. He engaged us with the future of optical neurotechnology applications in **Alzheimer's Disease** research, by studying how the reorganisation of neurons happens during memory consolidation and a potential therapy involving light that helps prevent memory loss.

Huge thanks to Professor Simon Schultz for delivering an inspiring talk for future neurotechnologists!

Full recording available [here](#)

### 2. Neurotech x Femtech x NeuroSoc Collab Talk Series



During the first term, our society hosted an exciting collaboration with Imperial FemTech, a society set on increasing awareness of women's health in industry. We joined forces to provide a series of talks with prominent figures from both of our fields.

These included:

- **The Neuroscience of Women's Health: The Basics** by Jessica Hobbs from ScreenMe
- **Innovative Femtech: Wearables and Apps for Women's Health** by Emile Radyte, Founder of Saphire Neuroscience
- **Neurobiology of Mental Health** by Emilie Faure, CEO & founder of Juniver
- **Neuroscience Rehabilitation: Using Technology for Treatment and Symptom Alleviation** by Jumpei Kashiwakura, co-founder & CTO of Neubond

A heartfelt thank you to all our speakers for sharing their talks and providing insight into their journeys. Their passion and expertise truly inspired everyone in attendance and fueled our commitment to continue **enhancing women's health through neurotechnology**. Thank you for making this collab event memorable and impactful for all!

## WHAT'S ON 📅: JANUARY 2025

### 1. London Neurotechnology Hackathon

**announcing**

**the london neurotechnology hackathon.**

IDEAS BRAIN HACK IDEAS VISION HACK BRAIN  
VISION MIND BRAIN HACK IDEAS VISION HACK BRAIN  
BRAIN HACK BUILD BRAIN HACK BUILD BRAIN HACK BUILD  
CREATE BUILD HACK BUILD VISION IDEAS VISION  
BUILD CREATE ENERGY ENERGY ENERGY  
HACK IDEAS IDEAS CREATE BRAIN IDEAS  
MIND VISION VISION VISION VISION  
BRAIN ENERGY BRAIN ENERGY  
CREATE IDEAS MIND  
IDEAS HACK VISION

hosted by the  
**Imperial College**  
neurotech society

open to all, free, register now

Applicants who got their place will have received an email to fill out a confirmation form. Please fill it out ASAP!

📅 Saturday, January 25th, 10AM to Sunday, January 26th, 4PM  
Location: Entrepreneur First office, Shoreditch, London

**We are currently in the process of planning spring term events: please stay tuned for upcoming talks and workshops on our Instagram and Whatsapp 😊**

**Also, Happy New Year everyone! 🎉**  
**Another great year with IC Neurotech Society waiting ahead! 🌟**

## EXTERNAL NEUROTECH OPPORTUNITIES 📦

### 1. 🌟🌟🌟 ARIA x Cambridge NeuroWorks Fellowship 🌟🌟🌟

DECEMBER 2024

**Cambridge NeuroWorks**

**WE ARE SEEKING BOLD THINKERS TO REVOLUTIONISE NEUROTECHNOLOGY**

- **Cambridge NeuroWorks** is a new three-year, multi-million-pound collaboration with Advanced Research + Invention Agency (ARIA) in the Scalable Neural Interfaces Opportunity Space, as part of ARIA's Activation Partner programme.
- **Our mission** is to address some of the most pressing neurological and mental health challenges, including depression, dementia, chronic pain, and brain injury, by overcoming barriers to accelerating the translation of bold ideas into investable propositions and real-world therapies.
- **Our programme is designed to catalyse** the translation of ideas by engineering serendipity, providing world-class mentorship and 'What If' ideation processes, awarding Blue Sky proof-of-concept project funding, providing business training, and awarding Fellowships to bold thinkers from across the UK.

**DEVELOPED IDEA, SEED OF AN IDEA, OR FINDING YOUR IDEA**

- We are already launching the **Cambridge NeuroWorks Fellowship Programme** and encourage applications from all backgrounds ('neurotech' or not), from anywhere in the world
- **Two types of Fellowships** depending on stage of your idea, and you will access some of the best Cambridge can offer:
  - a. **Blue Sky Fellowships** if you have speculative hypotheses and need the freedom to explore possibilities
  - b. **Frontier Fellowships** if you have a proof-of-concept idea and want to turn it into real-world solutions
- **Fellowships are just the beginning:** join the community to be the first to access our extensive network through physical events and virtually on **Connect: Health Tech**, 'What If' ideation cycles, **Blue Sky proof-of-concept funding** opportunities, mentorships, job opportunities, and more as soon they are available - to find & develop that winning idea!
- Cambridge NeuroWorks is committed to **Founder-friendly IP**

**Become part of our community**

**Apply for a Fellowship**

ARIA CAMBRIDGE UNIVERSITY Health Partners Maxwell MILNER Cambridge Neuroscience Cambridge and Peterborough UNIVERSITY OF CAMBRIDGE

www.CambridgeNeuroWorks.com  
enquiries@CambridgeNeuroWorks.com  
CambridgeNeuroWorks

**22** Cambridge and pan-UK events + symposia

**15** Up to 15 months of 'What If' cycles planned: full- & part-time

**8** Blue Sky Proof-of-concept project funding opportunities from July 2025

**0** Cost of being part of this community - incl. attending events!

**18** Planned 12mth Fellowships, 6 available now

**117** Approx. £117k grant for living, consumables, lab fees etc.

**17/01 2025** Fellowship applications close for the first cohort

1. Cambridge NeuroWorks brings together nine partners from across Cambridge.  
2. ARIA is an R&D funding agency created to unlock technological breakthroughs that benefit everyone.  
3. All figures quoted, over programme life

The ARIA x Cambridge NeuroWorks Fellowship launch mentioned in the previous newsletter has officially started receiving applications!  
Incredible opportunity not to be missed for future neurotechnologists 😊

Deadline: 17th Jan, 2025  
The image also available in better resolution here: [PDF](#)

### 2. ARIA funded Neurotech PhD Studentship at Imperial

ARIA is funding 3 neurotech PhD studentships, under Prof. James Choi from Imperial Department of Neurotechnology.

PhD stipend and fees covered for international / UK students.

Deadline to apply: 16th January, 2025

[Link](#)

### 3. How the Mind Works - Free Event

Monday, January 6 1-2pm GMT

Dianetics & Scientology Life Improvement Centre, 68 Tottenham Court Road London W1T 2EZ

[Link to tickets](#)

### 4. The science of imagination

Sat, 18 Jan 2025 19:00 - 20:30 GMT

The Royal Institution, 21 Albemarle Street London W1S 4BS

[Link to tickets](#)

### 5. SWC (Hybrid) Seminar - Professor Stuart Peirson, University of Oxford

Thu, 23 Jan 2025 12:00 - 13:00 GMT

Sainsbury Wellcome Centre, 25 Howland Street London W1T 4JG

[Link to tickets](#)

### 6. Neuromorphic Computing for Science

Fri, 24 Jan 2025 19:00 - 20:30 GMT

The Royal Institution, 21 Albemarle Street London W1S 4BS

[Link to tickets](#)

### 7. Introduction to Light Microscopy Workshop

Thursday, January 30 · 10:30am - 12pm GMT

Maurice Wohl Clinical Neuroscience Institute, 5 Cutcombe Road London SE5 9RX

[Link to tickets](#)

### 8. The Connected Brain: Network and Communication

Tuesday, February 4 · 6 - 7pm GMT

Gresham College, Barnard's Inn Hall Holborn London EC1N 2HH

[Link to tickets](#)

### 9. INTERPHACE symposium 2025

Monday, February 24 · 9am - 5pm GMT

The Francis Crick Institute, 1 Midland Road London NW1 1AT

[Link to tickets](#)

### 10. British Neuroscience Association Conference

27th - 30th April, 2025

King's Dock, Port of Liverpool, Kings Dock St, Liverpool L3 4FP

[Link to tickets](#)

Early Bird deadline: 31st Jan

[Early bird fee](#) (Note: Ticket £100+ quite expensive)

## ★ TECHNOLOGY ⚙️ OF THE MONTH ★

**Deep Brain Stimulation (DBS)** is a surgical procedure implanting device that sends electrical signals to the desired brain area, usually the ones responsible for motor control.

It is often used to treat motor-related neurological disorders, such as dystonia, epilepsy, essential tremor, and Parkinson's disease. Similar to the heart pacemaker, DBS places electrodes deep inside the brain and regulates brain activity to relieve motor symptoms like tremor, slowness, or stiffness. Currently, the field of DBS application is expanding to wider range of neurological disorders like depression, eating disorder, or Tourette syndrome.

References:  
<https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/deep-brain-stimulation>  
<https://myfieldclinic.com/de-brain.htm>  
<https://www.ninds.nih.gov/health-information/disorders/deep-brain-stimulation-movement-disorders>  
<https://my.clevelandclinic.org/health/treatments/21088-deep-brain-stimulation>

## ★ PAPER 📄 OF THE MONTH ★

Selected paper of January 2025 is:

**"Innovating beyond electrophysiology through multimodal neural interfaces 🌟"**  
**(Ramezani et al, 2024)**

This paper reviews the potential of multimodal neural recording technologies, which combines the strengths of electrical and optical neural technologies. The paper suggests potential for the bridge between two fields to revolutionise neural dynamics studies in memory formation and brain organoid studies for personalised medicine.

It's a very comprehensive review paper with nice figures and very up to date (published December 2024) - have a look at the full paper with this [link](#)

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