✓ NBDT is a true community journal, open in every way. Open science. Open data. Note: we are openly asking for self-nominations for potential reviewers (see NBDT website: https://nbdt.scholasticahq.com/)

✓ Is my article appropriate for NBDT?

• Journal’s scope: data, theory, and analysis. NB: This explicitly includes (but is not limited to): behavior-only studies, software development, systems neuroscience, theory-only studies, and data-analysis methods.

• Manuscript submission: (1) You name 3 editorial board members. (2) Editors are instructed to handle papers that they consider running as a journal club paper for their own lab. (3) If the 3 editorial board members all decline to handle the paper it is automatically rejected. If not, it goes through peer-review.
Who are we?

- Academics only (no professional publisher)

- Editorial board (excerpt):
  - Jonathan Pillow, Anne Churchland, Konrad Kording
  - Aapo Hyvarinen, Adam Kepecs, Angela Yu, Bruno Averbeck, Danielle Bassett, Daphna Shohamy, Jack Gallant, Jeff Beck, Joern Diedrichsen, Kathleen E. Cullen, Larry Maloney, Michael Platt, Nathaniel Daw, Peter Dayan, Quentin Huys, Russ Poldrack, Yael Niv

NBDT is free for readers and for authors (well, in fact, publication fees are 10$)
- Open-source hardware
- Growing family of devices
- Share the same communication protocol and architecture
- Each device solves a specific problem
- Matlab, LabVIEW, Bonsai and Python compatibility

**HARDWARE SYNCHRONIZATION**

- The Clock Synchronizer distributes the timestamp.
- Deviation between devices of ± 44 µs.
- The Clock Synchronizer integrates video synchronization.

**NON-VOLATILE CONFIGURATION**

- Online updates of GUI and device's firmware.
- Always Sleeping process and notify.
- Event occurs.

**EVENTS BASED**

- Creates small data files.
- Eliminates unnecessary processing.
• **Wear**  Wireless 9-axis motion sensor with optogenetics
• **Load Cells Reader**  With offset removal by hardware
• **Sound Card**  192 KHz, 115 dB SNR, 500us latency
• **Behaviour**  All you need for a behaviour setup
• **TTL Synchronizer**  Syncs 9x TTL from different devices
• **Archimedes**  Lever w/ configurable counter-weight
• **Multi PWM Generator**  Synchronized modulated pulses
• **Audio Switch**  One input to 16x outputs
• **12V output drive**  Drives valves and speakers
• **Camera Controller**  Two cameras up to 800 Hz
• **LED Array**  For fly’s optogenetics
• **RGB Array**  64x RGB with configurable gain
1x Photodiode (sync with visual stimuli)
3x Pokes, Valves and LEDs
2x Cameras
2x LEDs up to 100 mA
2x Servos
4x Speakers
2x RGBs
1x Encoder

2x Cameras
3x Pokes, Valves and LEDs

www.cf-hw.org

Want to know more
Share designs
Colaborations

We can share the devices already assembled.
A free and open-source solution for the acquisition and real-time processing of biosignals
EASY TO USE
Describe your processing pipelines using a simple YAML syntax. From device drivers to recording modules, everything is a node.

BATTERIES INCLUDED
Comes with Lab Streaming Layer support, essential DSP nodes, Pub/Sub, HDF5 recording and playback, Machine Learning tools, web monitoring interface.

DEVELOPER-FRIENDLY
Write your own plugins in Python using the tools you already know: SciPy, Pandas, Xarray, Scikit-learn.
“Peer Community in” (PCI) is a non-profit scientific organization that aims to create specific communities of researchers that peer-review and recommend preprints in their field, for free.

BioRxiv:

- Neuroscience: 17%
- Molecular Biology
- Microbiology
- Immunology
- Genetics
- Epidemiology
- Evolutionary Biology
- Ecology
- Developmental Biology
- Clinical Trials
- Cell Biology
- Cancer Biology
- Bioengineering
- Plant Biology
- Pharmacology
- Toxicology
- Paleontology
- Bioinformatics
- Biophysics
- Systems Biology
- Synthetic Biology
- Biochemistry
- Animal Behavior
- Ecology

PREPRINTS

- CREDIT
- FEEDBACK
- VISIBILITY

Quickest dissemination of scientific findings
Issues with preprints:

**PREPRINTS**

1. Not enough feedback
2. No quality control

Preprint peer-review: **PCI**

1. Validation of your preprint
2. Feedback to authors
3. Open access reviews

BioRxiv new preprints vs comments

- New preprints
- % with comments

PCI: Peer-reviewed by PCI for free
Your preprint is recommended
COME AND CHAT WITH US TODAY – WE WANT TO HEAR YOUR OPINIONS!