

Cognition and Neural Systems (CNS) Journal Club

Spring Semester 2023-2024

The **Cognition and Neural Systems (CNS)** Journal Club (nee' BCS Journal Club), also known as **PSYCH 6271-101 (6528)**, meets on **Tuesdays from 11:40 to 1:00 pm(ish) in Ives Hall 107 - NOTE THE NEW ROOM!**

Papers and notes from previous semesters can be found in the **CNS (BCS) meeting archive**.

Shortlink to this page: <https://cornellneuro.science/cnsjournalclub>

Presentations in the CNS JC are intended to "show us what you are interested in"; i.e., present work within your subfield that illustrates why it is interesting and broadly applicable. It is less important to choose papers that you think will be close to every attendees' heart than it is to choose papers that are blisteringly important or interesting or controversial in your own subfield, and explain/share this with the group. It's good for all of us. The corollary is that journal club members attend regularly, and don't decide whether to attend in a given week based on what is being presented.

Presenting your own work is always welcome, in whatever manner you like.

To add yourself to the mailing list, send a plain-text email to bcsl-request@cornell.edu (BCS is the historical name of the journal club) with the subject line of the message saying simply **join**, and the body of the message blank/empty. Sending the message with a subject line of **leave** instead will unsubscribe you from the list. See [Cornell's Lyris HowTo page](#) for further details.

You can enroll in the CNS Journal Club for graduate or undergraduate credit (1 CR, S/U) as a *Topics in Biopsychology* seminar: PSYCH 6271. The course requires that you present at least once during the semester and participate actively overall. You are welcome to attend without enrolling, of course, but we do appreciate you enrolling if you plan to attend the whole semester and to present.

Please contact [Thomas Cleland](#) or [David Smith](#) with any questions.

23 January 2024: Organizational Meeting

30 January 2024: Cancelled - see you next week.

6 February 2024: Tim DeVoogd

- [J. N. Audet, M. Couture, E. D. Jarvis \(2023\)](#). Songbird species that display more-complex vocal learning are better problem-solvers and have larger brains. *Science* 381, 1170–1175.

13 February 2024: Lindsay Sailer

- [A. Kamierowska, M. Kostecki, M. Szczepanik, T. Nikolaev, A. Hamed, J. Michaowski, M. Wypych, A. Marchewka, and E. Knapka. \(2023\)](#). Rats respond to aversive emotional arousal of human handlers with the activation of the basolateral and central amygdala. *PNAS*, 120(46):1-9.

20 February 2024: Dev Subramanian - Time Cells in the Retrosplenial Cortex

- Optional background reading: [Eichenbaum, H. \(2014\)](#). Time cells in the hippocampus: a new dimension for mapping memories. *Nature Reviews: Neuroscience* (15)732-44.

27 February 2024: *Feb Break - no meeting*

5 March 2024: David Smith

- [A. LePort, A. Mattfeld, H. Dickinson-Anson, J. Fallon, C. Stark, F. Kruggel, L. Cahill, J. McGaugh \(2012\)](#). Behavioral and neuroanatomical investigation of Highly Superior Autobiographical Memory (HSAM). *Neurobio. Learn. Mem.* 98:78-92.
- Optional background reading (short and very interesting!): [A. Luria \(1968\)](#). The Mind of a Mnemonist. Ch 38. In U. Neisser, *Memory Observed: Remembering in Natural Contexts*, 1982, W.H. Freeman and Co., New York, 382-9.

12 March 2024: Hamid Turker

- [C. Lai, S. Tanaka, T. Harris, A. Lee \(2023\)](#). Volitional activation of remote place representations with a hippocampal brain-machine interface. *Science* 382:566-73.

19 March 2024: CANCELLED - Will be rescheduled soon (Wendy Yang).

26 March 2024: Wendy Yang

- [Y. Shi, J. Yan, X. Xu, Z. Qiu \(2024\)](#). Gating of Social Behavior by Inhibitory Inputs from Hippocampal CA1 to Retrosplenial Agranular Cortex. *Neurosci. Bull.* <https://doi.org/10.1007/s12264-023-01172-0>

2 April 2024: *Spring Break - no meeting*

9 April 2024:

16 April 2024: Chen Yang

- Hot off the press: the [second Annolid paper](#) (arXiv preprint), focusing on Annolid's new zero-annotation automatic tracking capabilities.
- Chen will present the newest developments in the *Annolid* software package for deep learning-based behavior analysis using instance segmentation. There are substantial new advances to present, based on new models including Cutie VOS (*visual object segmentation*) and Meta's Segment Anything that are used for easier object identification and automatic tracking. Come with your ideas, questions, and research needs.
- You also can look at our lab's two Annolid-related posters from SFN 2024 for an introduction: [Chen Yang et al.](#), [Ray Fang et al.](#)
- There are also several [Annolid videos](#) posted on Youtube; our MATB playlist is at <https://cplab.science/matb>.

23 April 2024: David Zheng

- [A. Sharif, J. Matsumoto, C. Chojiljav, A. Badarch, T. Setogawa, H. Nishijo and H. Nishimaru \(2024\)](#). Characterization of Ultrasonic Vocalization-Modulated Neurons in Rat Motor Cortex Based on Their Activity Modulation and Axonal Projection to the Periaqueductal Gray. *eNeuro* 11(4):1-10.

30 April 2024: Hamid Turker

- Medial prefrontal cortical neurons differentiate match and non-match cues in a continuous olfactory match-to-sample task. Original research, no readings.

Until next fall...