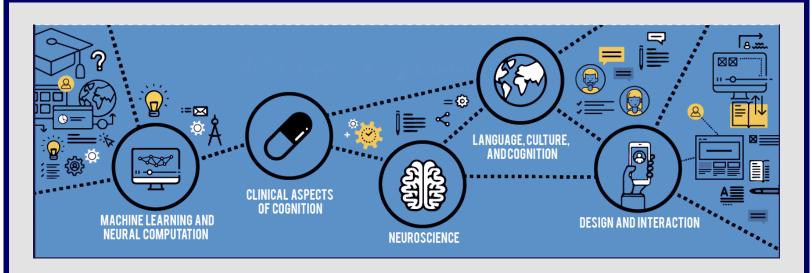
#### Newsletter Ed. December 2018





## Talk Series coming up in Winter!

In the Talk Series, Cognitive Science professors representing different specializations will discuss their work in the field. It will be a great chance to get to know your specialization and learn more about the other specializations. More information will be available in the January newsletter so stay tuned!

### **EVENTS COMING UP IN WINTER:**

Week 2 GBM #1 Talk Series: Neuroscience/Cognitive Behaviour al Neuroscience (CBN)

Neuroscience: Professor Andrea Chiba will discuss her research in neuroscience and share her insights on working in the field. More information coming up in the next newsletter...

Social #1: Neuroscience/ CBN

Week 3 GBM #2 Talk Series: Machine Learning & Neural Computation (MLNC)

Social #2: MLNC

Week 4 GBM #3 Talk Series: Language and Culture (L & C)

Social #3: L & C

### Week 5

GBM #4: Design and Interaction (D & I)

Social #4: D & I

# What's new in the CogSci world?

Lab-grown mini-brains spontaneously produced 'humanlike' brain waves for the first time

Researchers from UCSD have used stem cells to grow brain "organoids" over a span of 10 months. The electrical activity in these mini brains occurred at a higher rate than what has been documented before in other labgrown organoids. The electrical patterns were chaotic and resembled patterns similar to that of the brains of premature babies. There is a current lack of accessibility to information regarding the initial stages of brain development, which makes it difficult to study and understand the impact of brain disorders, like epilepsy, in infants. Researchers ultimately hope their work will help facilitate further research in the study of the early stages of brain disorders. However, this research has also fostered further debate and discussion on the accuracy of using such organoids to model the development of earlystage brain disorders. Although the patterns of activity may resemble each other, it is still difficult to form conclusions about the

Week 6 GBM #5: Clinical Aspects

Social #5 Clinical Aspects

Interested in studying abroad as a Cog Sci major? Find out more about <u>Global</u> <u>Seminars in Cognitive Science</u> at <u>https://studyabroad.ucsd.edu/students/</u> programs/global-seminars/cogsci.html



Psychopharmacology in Florence Florence, Italy Professor Stephan Anagnostaras Biology, Cognitive Science, Health Care Social Issues, Pharmacological Chemistry, Psychology Public Health



The Origins of Mind St Andrews, Scotland Professor Christine Johnson

rrofessor Christine Johnson Bological Anthropology, Biology, Cognitive Science, Psycholog Bummer Session 1

Social Cognition and Drugs in Australia Sydney, Australia Professor Jaime Pineda Cognitive Science, Psychology Summer Session 2

### Have questions for CSSA?

Contact us at <u>cssa.ucsd@gmail.com</u>

Have questions about Cognitive Science?

Visit <u>http://www.cogsci.ucsd.edu</u>

underlying mechanisms of the electrical activity.

**News Article** 

Link to the research article

### Machine learning used to automatically detect mind wandering during driving

We're all guilty of it, whether it be in class or during a drive. Our mind wanders. It's unintentional, but it still happens. However, studies have shown that mind wandering (MW) is inversely correlated with driver safety; the less a person pays attention while driving, the greater the likelihood of an accident. This study served (and was the first of its kind) to successfully build and utilize models capable of automatically detecting MW during driving. To do so, participants were first tested on their reaction time in a car-following task and upon hearing a tone, self-reported their MW state. Then, modelling and machine learning methods were used to classify driving behavior variables (e.g., distance between vehicles and

acceleration/deceleration) into two groups: MW-absent and MWpresent. This study is just one example of how machine learning is used in real life, as results showed that mind wandering frequency increased over time, and researchers expect this detecting system could be adjusted for everyone in everyday life.

### Link to full article

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