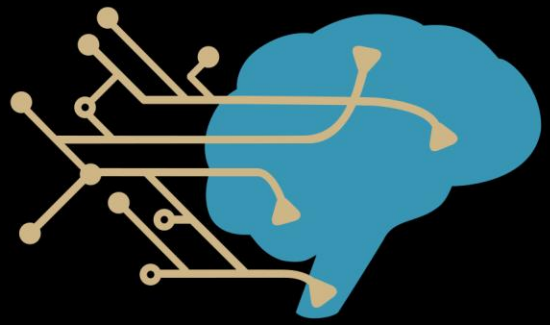

CENTER *for*
NEUROTECHNOLOGY

a National Science Foundation Engineering Research Center

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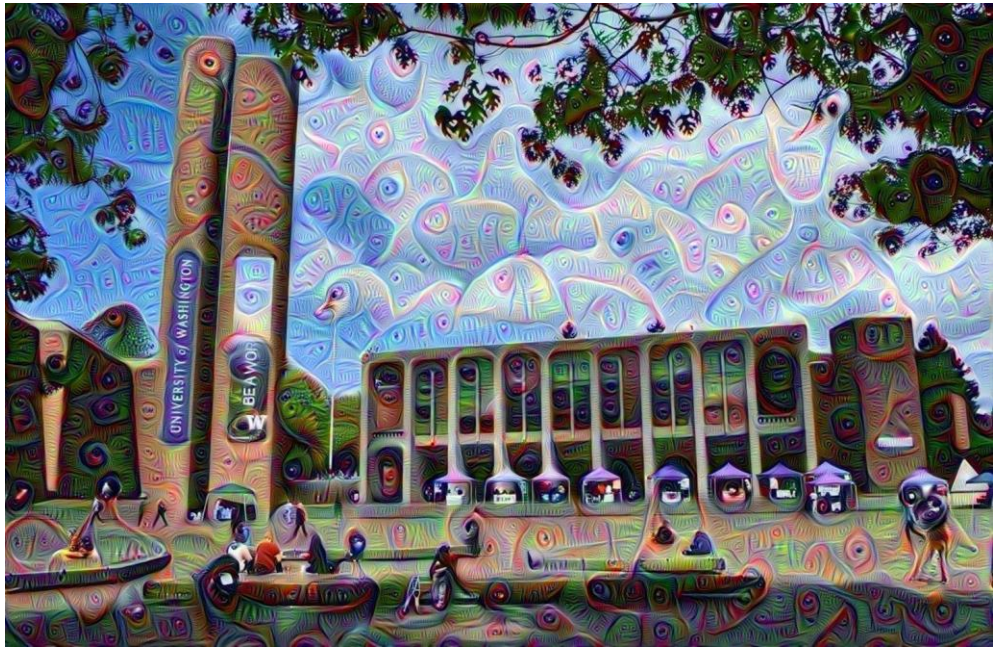
June 25, 2019

Announcements

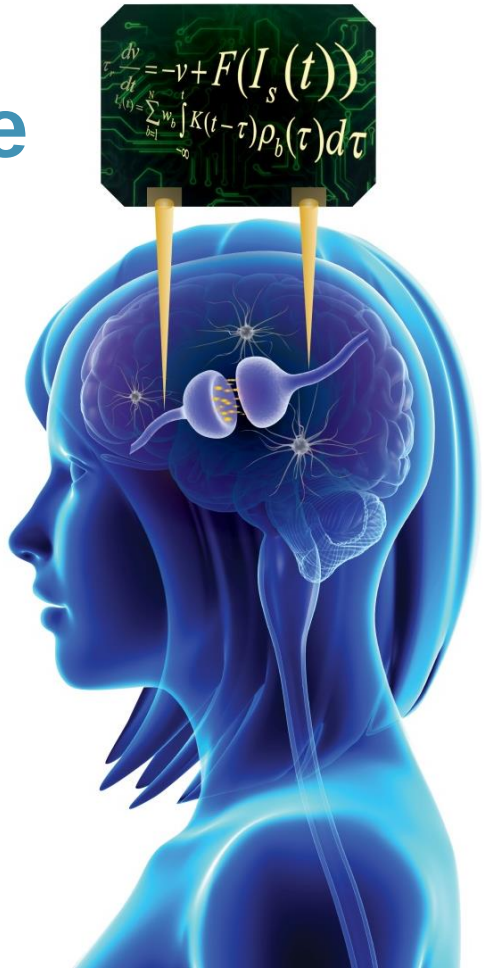
- June 28 (Friday), 9 am: “Industry Opportunities and Issues” - Dr. Scott Ransom, Center for Neurotechnology, Director of Industry Relations and Innovation



June 25, 2019

Summer Communication Course

http://faculty.washington.edu/chudler/cc2019.html



Eric H. Chudler, Ph.D.

Executive Director/Education Director, CNT
Research Associate Professor, UW Bioengineering
Research Associate Professor, UW Anesthesiology

Email: chudler@uw.edu
Phone: 206-616-6899

Course Logistics

Meeting Times and Location:
9:00 – 10:30 am, Tuesdays
CSE2, Room 371/382

Course Description:
The purpose of this course is to prepare you to communicate your research effectively in a variety of formats. The course is also designed to help you present your summer research at the end-of-summer symposium. Students in this class represent a diverse set of backgrounds and skill levels. This means that we all have something to learn and something to teach. If you bring this attitude, this course will be a productive use of your time.

Discussion (safe) and participation is critical!

Course Logistics

Course Schedule:

June 25	Intro, logistics, and literature review and citations
July 2	Scientific Writing
July 9	Publication quality figures
July 16	Scientific posters
July 23	Slides and public speaking
July 30	Abstract writing
August 6	Communication with a lay audience/research statement
August 13	Up-goer
August 20	Test PPT/Practice/Elevator pitch

Important Dates:

August 9	Poster rough drafts due
August 14	Final posters due (by noon)

Slides posted to web site!

Final Presentations (5 minute talks/Poster Presentations):

August 21 (Wed.), 9 am–3 pm at the CNT

Who Am I?

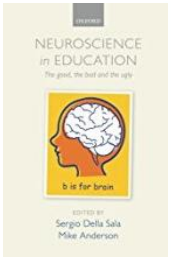
(5) UW
1991-1998, Res. Asst. Prof
1998-, Res. Assoc. Prof

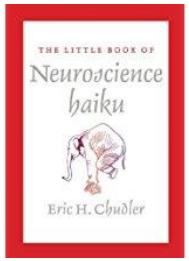
(4) MGH
1989-1991
Instructor

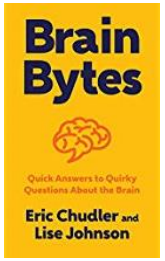
(2) UW
1980-1983, MS
1983-1985, PhD

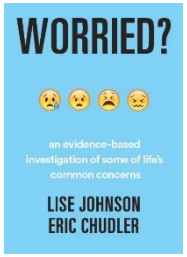
(1) UCLA
1976-1980, BS

(3) NIH
1986-1989
Post-doc

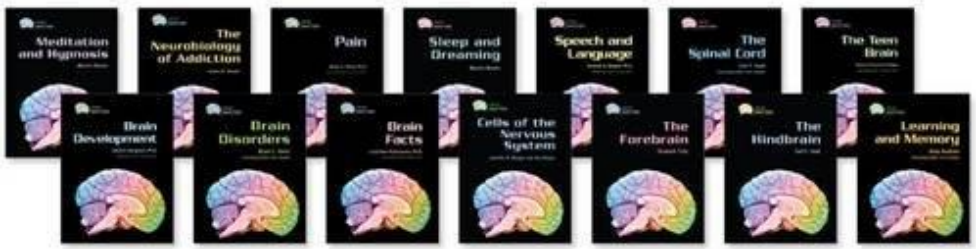


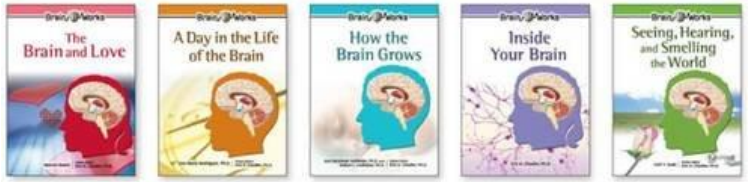


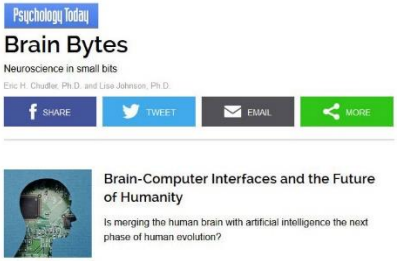




BrainWorks TV Show
http://www.washington.edu/video/brainworks/







Who Are You?

Name

Current School/Major

Why did you apply to a Center for Neurotechnology summer research program (REU / REV / UW UG Fellows)?

What is the largest group of people you have spoken to?

and/or

What was the most stressful presentation you have ever made?

A Brief Introduction: CNT's Transformational Vision

Revolutionize the treatment of:

- **stroke**
- **spinal cord injury**
- **other neurological conditions**

by discovering the principles of *engineered neuroplasticity* to restore nervous system function

Why is this vision transformational?

- 5M/year worldwide survive a stroke but left with permanent disability
- 130K/year in US suffer stroke with hand/arm paralysis (WHO, 2018)
- 0.5M/year worldwide new spinal cord injuries (SCI) (WHO, 2018)
- >288K individuals in US with chronic SCI (NSCISC 2018)
- 7M people in US with essential tremor (Louis & Ottmann, Tremor Hyperkinet. Mov. 2014)

Current treatments are largely ineffective, focusing on accommodation & medication

CNT's transformative solution: Engineered Plasticity to promote long-term recovery of hand & arm function

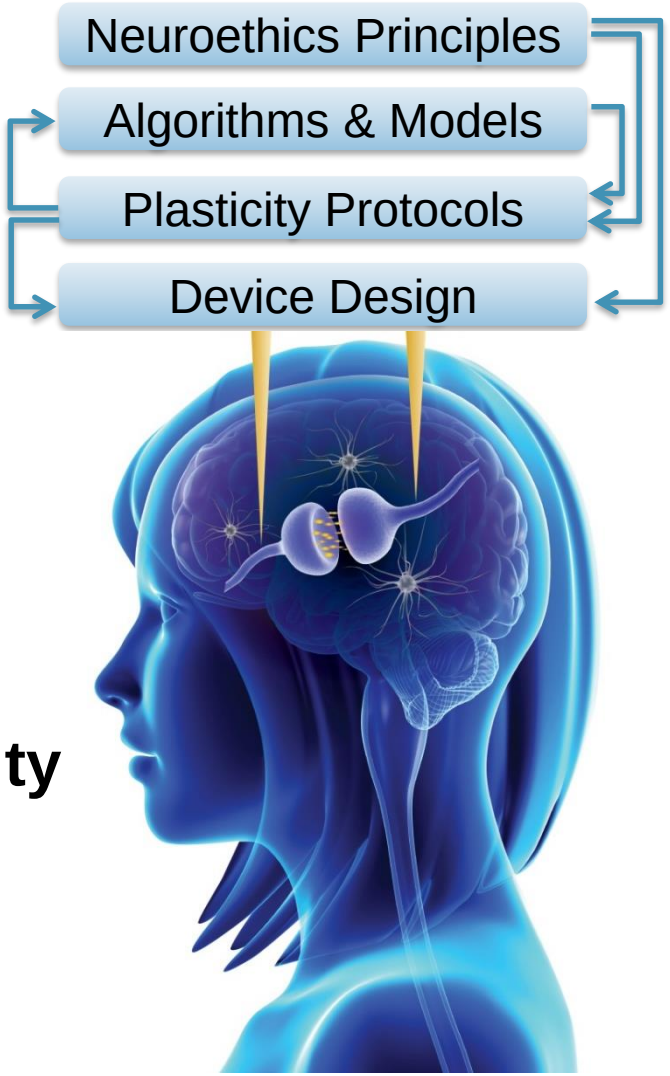
CNT Transformational Engineered System

Algorithms & Models:
Co-adaptive algorithms to interface with CNS

Plasticity Protocols: Parameters, & methods of closed-loop stimulation to induce plasticity

Device Design: Multifunctional electrodes & wireless devices to induce & quantify engineered plasticity

Neuroethics Principles: Ethics embedded in design



Back to Scientific Communications!

1. Why is it important to communicate research?

Because: 1) We should 2) We want to 3) We have to

2. Who are (or will be) your audiences?

Peers, editors, reviewers, mentors, public, employers, family

3. Where will you communicate your research?

"Elevator"

Conferences, classes, journals, grant applications, interviews

4. When will you present your research?

Research completed, in progress, this summer, after summer

5. How (methods/modes) will you communicate your research?

Papers, talks, posters, grant applications, blogs, articles

Things to Do (Summer 2019)

1. Attend a non-CNT seminar.
2. Read a science story in a popular science magazine, in the newspaper or on a web site.
3. Talk to a non-scientist/non-engineer about your work.
4. Go to a local science “event.”

http://www.scienceontap.org | https://www.pacificsciencecenter.org

https://www.meetup.com/EdTechSeattle/events/260270111/

Is it factual? Is it understandable?

Look for effective ways to communicate.