

The Temporal Dynamics of Learning Center



TDLC Educational Partners:

Scientific Learning Corporation (SLC)
The Science Network (TSN)
Arbutus Middle School
Center for Human Development (CHD)
The Preuss School
San Diego Cooperative Charter School
UCSD Early Childhood Education Center
The Museum School
New Children's Museum
High Tech High Middle & High Schools
Mountain Ridge Middle School, Colorado
Greater Victoria School District 61, Canada
The San Diego Brain Bee
Sweetwater Unified School District
UCSD Academic Enrichment Program
Data Intensive Cyber Environments Center
The Art of Science Learning
Rueben H. Fleet Science Center

Join us in our labs at the following institutions:

Brown University
Carnegie Mellon University
Children's Hospital of Philadelphia
University College London
New York University
Rutgers University
The Salk Institute
San Diego State University
University at Buffalo SUNY
UC Berkeley
UC San Diego
University of Colorado, Boulder
University of Pittsburgh
University of Queensland, Australia
University of Victoria
University of Washington
Vanderbilt University
Virginia Commonwealth University

Building a Better Science of Learning: It's About Time!

OUR MISSION

The mission of the Temporal Dynamics of Learning Center (TDLC) is to create a new science of the temporal dynamics of learning in which we achieve an integrated understanding of the role of time and timing in learning, across multiple scales, brain systems, and social systems.

DIVERSITY, OUTREACH & TRANSLATION

A major area of TDLC's focus is in providing education and outreach to the public, education professionals, our fellow scientists and trainees, and K-12 schools.

• K-12 Student and Teacher Outreach

We use our research to integrate neuroscience into educational theory and practice, and ultimately, translate our findings into innovative technologies and programs.

• Outreach To, And Education of, Undergraduates, Graduates, and Post-Docs

A variety of TDLC programs directly involve students in TDLC labs at each of our 18 participating Universities, located in four countries (U.S., Canada, England, and Australia).

• Outreach To The Public

The Science Network, the TDLC and REU websites, a Center newsletter, and the Dart NeuroScience - TDLC Seminar Series educate the public on content and impact of our science.

TRANSLATION

- **The Educator Network (TEN):** Includes both a social networking website for TDLC investigators and educators, and the Distinguished Educator Advisory Panel (DEAP), composed of expert educators with an interest in the translation of neuroscience research to education. <http://theeducatornetwork.ning.com/>
- **Emotient:** A TDLC start-up company that provides leading-edge software for facial expression detection and analysis. <http://www.emotient.com/>
- **The Science Network (TSN):** Creates informed programs about science and offers them to the public through their website: <http://thesciencenetwork.org/>
- **The Colorado Optimized Learning Tutor (COLT):** Software developed by TDLC investigators to help promote long term retention of knowledge.
- **Scientific Learning Corp (SLC):** A TDLC partner that develops and distributes educational software for K-12 students <http://www.scilearn.com/>



K-12 OUTREACH

- **Face Camp:** A one day summer camp at University of Victoria, B.C., designed to teach children face processing skills using interactive exercises & computer-based activities. <http://web.uvic.ca/~letsface/letsfaceit/>
- **The Gamelan Project:** At the Museum School in San Diego, TDLC researchers monitor children's ability to synchronize precisely, using the Balinese Gamelan drum. The team has found a correlation between children's ability to synchronize and their score on measures of attention. <http://tdlc.ucsd.edu/gamelan/>
- **SIMPHONY:** "Studying the Influence Music Practice has On Neurodevelopment in Youth," is one of the first longitudinal studies on the effects of musical training on brain development and language/attention. <http://www.chd.ucsd.edu/research/symphony-study.html>
- **The Preuss School Internship Program:** A 13-week TDLC lab internship program for Preuss School seniors, who are low income, 1st generation college bound students.
- **Brain Awareness Week (BAW):** TDLC hosts an annual webinar for San Diego area schools and the community, which includes a speaker, a student panel, and a "meet and mingle" with TDLC scientists.
- **RUBI:** A social robot who teaches toddlers colors and shapes according to the California standards, at the UC San Diego Early Childhood Education Center.
- **Presentations, Trainings and Demos:** TDLC scientists provide demos and trainings in their labs, and present their research at local schools and during community events.

OUTREACH TO, AND EDUCATION OF, UNDERGRADS, GRADS, AND POST-DOCS

- **The Research Experience for Undergraduates (REU) Site Program:** Funded by the National Science Foundation, the program aims to train undergraduate students in the specific TDLC research areas. <http://www.tdlc-reu.ucsd.edu/>
- **Music & the Mind:** TDLC scientists provide expos and symposiums on the topic of Music & the Brain.
- **TDLC Boot Camp:** A two-week program designed to broaden trainees' understanding of TDLC research, encourage them to undertake new approaches to their own research, and cultivate new collaborations.
- **Participation in Annual Scientific Conferences:** Trainees and scientists participate in nationwide conferences, with opportunities to present posters and publish research.
- **Additional Activities:** Center members engage in annual All Hands Meetings, Fellows lecture series and retreats, training grants, Dart NeuroScience-TDLC Seminar Series, neuroscience outreach and research demos in partner schools and at community events.

DIVERSITY

- **Participation in Diversity Conferences/Initiatives:** The California Alliance for Minority Participation in Science, Engineering, & Mathematics Program (CAMP), The Society for the Advancement of Chicanos & Native Americans in Science (SACNAS), and The California Forum for Diversity in Graduate Education.
- **UC San Diego Howard Partnership for Graduate Success:** A TDLC grant to bring Howard University students to UC San Diego to attend a summer research program, with the goal of recruiting them to UCSD for their doctorates. Three Howard students joined UCSD this fall. <http://partnership.ucsd.edu/>