

Welcome to the **13th annual UTSA Neuroscience Symposium**

3D MODELS OF HUMAN CORTEX DEVELOPMENT AND FUNCTION

October 20th, 2022



Jenny Hsieh, PhD

Dept. Chair, Semmes Foundation Endowed Professor
University of Texas at San Antonio
Welcome and introduction to the Symposium



Giorgia Quadrato, PhD

Assistant Professor
Keck School of Medicine of University of Southern California
Upgrading the physiological relevance of human brain organoids



Fikri Birey, PhD

Assistant Professor
Emory University School of Medicine
Uncovering cellular and molecular mechanisms underlying human cortical development and disease using forebrain assembloids



In-Hyun Park, PhD

Associate Professor
Yale School of Medicine
Genetic engineering of brain organoids to incorporate the vessel and immune cells



Vanesa Nieto-Estevez, PhD

Assistant Professor of Research
University of Texas at San Antonio
Modeling childhood epilepsies using human brain organoids

Location: BSE 2.102 Multipurpose Room

Time: 9:30a – 4:00p

Free And Open To The Public



Sponsored By:
UTSA Brain Health Consortium
UTSA Neuroscience



Suzanne Appleyard PhD
Washington State



Ivan de Araujo PhD
Mount Sinai



Diego Bohorquez PhD
Duke



Lindsey Macpherson PhD
UTSA



Lindsey Schier PhD
U Southern California



Alan Spector PhD
Florida State

2020 Neuroscience Symposium

A Gut Feeling: Chemosensory signaling from the tongue & gut to the brain

November 12, 2020 | 10a-5p CST
Via Webex

Free & open to the public

Symposium Introduction

Taste: Chemical sensing at the entry to the alimentary tract & its multifaceted functional roles

Alan Spector PhD

Distinguished Research Professor
Florida State University

Panel Lectures, in order of appearance

Lindsey Macpherson PhD

Assistant Professor
University of Texas San Antonio

Getting a GRASP of chemosensory connectivity in the tongue & gut

Diego Bohorquez PhD

Assistant Professor
Duke University School of Medicine

A gut choice

Ivan de Araujo PhD

Professor
Mount Sinai Icahn School of Medicine

The vagus nerve & the physiology of reward

Suzanne Appleyard PhD

Professor
Washington State University

Modulation of vagal synaptic transmission: Changing how the gut talks to the brain

Lindsey Schier PhD

Gabilan Assistant Professor
University of Southern California

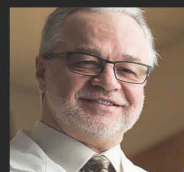
Oral & post-oral sensors linked to glucose appetite



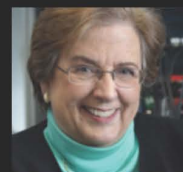
**Mark
Bevan PhD**
Northwestern



**Robert
Turner PhD**
U of Pittsburgh



**Jerrold
Vitek MD PhD**
U of Minnesota



**Judith
Walters PhD**
NINDS



**Charles
Wilson PhD**
UT San Antonio

September 12, 2019 | 9a-5p
BSE 2.102 | UTSA Main Campus

Free & open to the public

2019 Neuroscience Symposium

Brain Oscillations in Parkinson's Disease



(in order of appearance)

Jerrold L. Vitek MD PhD
McKnight Professor & Chair
University of Minnesota

*Oscillatory activity in the basal ganglia:
Is it enough to explain Parkinson's disease?*

Robert S. Turner PhD
Professor of Neurobiology
University of Pittsburgh

Oscillations & deep brain stimulation

Judith R. Walters PhD
Senior Investigator
NINDS

*Exploring the significance of exaggerated
oscillatory local field potential activity in the
Parkinsonian rat*

Marc Bevan PhD
Professor in Physiology
Northwestern University

*Maladaptive plasticity of the subthalamic nucleus
in mouse models of Parkinson's disease*

Charles J. Wilson PhD
Ewing Halsell Chair
University of Texas San Antonio

*How do oscillations engage brain networks?
Entrainment & synchrony in the basal ganglia*



Alfonso Araque
U Minnesota



Philip Haydon
Tufts U



Erik Herzog
Washington U



Carlos Paladini
UT San Antonio



February 9, 2018 | 9a-5p
BSE 2.102 | UTSA Main Campus
Free & open to the public

2018 Neuroscience Symposium

Astrocytes in Synaptic Control

Alfonso Araque PhD

Robert & Elaine Larson
Neuroscience Research Chair
University of Minnesota

*Circuit-specific synaptic regulation
by astrocytes*

Philip Haydon PhD

Annetta and Gustav Grisard
Professor of Neuroscience
Tufts University

Sleep & wake coordinated by glia

Erik Herzog PhD

Professor of Biology
Washington University St Louis

*Daily modulation of synapses &
behavior: Roles for astrocytes*

Carlos Paladini PhD

Professor of Biology
University of Texas San Antonio

*Ventral Tegmental Area astrocytes
orchestrate learned reward & aversion*

Additional sponsorship provided by





André A. Fenton
NYU



James Knierim
Johns Hopkins



Isabel Muzzio
UT San Antonio



A. David Redish
University of MN

September 14, 2017 | 9a-5p
BSB 3.03.02 UTSA Main Campus

2017 Neuroscience Symposium

Neural Codes of Navigation



Featuring (in alphabetical order)

André A. Fenton PhD

Professor
Center for Neural Science
New York University

*The dynamic structure of cognition:
If space were time?*

James Knierim PhD

Professor of Neuroscience
Krieger Mind/Brain Institute
Johns Hopkins

*Interaction between self motion &
landmarks in hippocampal space
codes*

Isabel Muzzio PhD

Associate Professor
UTSA Neurosciences Institute
University of Texas San Antonio

*Hippocampal correlates of spatial
reorientation*

A. David Redish PhD

Distinguished McKnight University Professor
University of Minnesota

*Information processing differences
between planning & procedural
navigation systems*



Stan Floresco
U British
Columbia



Patricia Janak
Johns Hopkins



Hitoshi Morikawa
UT Austin



Nao Uchida
Harvard



Matt Wanat
UTSA



October 13, 2016

9:30am-5pm

BSE 2.102 UTSA Main Campus

Free Parking available by pre-arrangement

2016 Neuroscience Symposium

Dopamine Neurons & Motivated Behavior



Stan Floresco PhD

Uncertainty, Choice, and Dopamine

Patricia Janak PhD

Refining roles for Dopamine in Learning

Hitoshi Morikawa MD

Synaptic Plasticity in the Dopamine Circuit: Does timing matter?

Nao Uchida PhD

Dissecting Neural Circuits underlying Dopamine Prediction Errors

Matt Wanat PhD

Putting Dopamine Release and Behavior into Context

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by

UTSA
NEUROSCIENCES
INSTITUTE



Alfonso Apicella
UTSA



Dan Feldman
UC Berkeley



Massimo Scanziani
HHMI - UCSD



Li Zhang
USC



November 4, 2015 | 9a-5p
BSB 3.03.02 UTSA Main Campus

2015 UTSA Neurosciences Institute Symposium

Cortical Sensory Processing



Alfonso Apicella PhD

Assistant Professor
Neurosciences Institute
UTSA

*Cortical Circuits of Interhemispheric
Communication*

Dan Feldman PhD

Professor
Helen Wills Neurosciences Institute
UC Berkeley

*Rapid homeostasis by inhibitory circuits in
rodent somatosensory cortex*

Massimo Scanziani PhD

Associate Professor
UTSA Neurosciences Institute
University of Texas San Antonio

Cortical Circuits of Vision

Li Zhang PhD

Associate Professor
Keck School of Medicine
USC

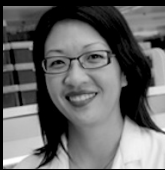
*Cortical inhibitory control of auditory
processing*



Bruce Appel
Diane G Wallach
Endowed Chair of
Pediatric Stem
Cell Biology



**Philip
Horner**
Professor of
Neurosurgery, UW
Seattle



Jenny Hsieh
Associate
Professor, UT
Southwestern



**Anthony
Koleske**
Professor
Kavli Institute
Yale University



**Arnold
Kriegstein**
Director, Eli and
Edythe Broad
Center of
Regeneration
Medicine & Stem
Cell Research
UCSF



**Annie
Lin**
Assistant
Professor,
UTSA



**Vance
Lemmon**
Walter G. Ross
Chair of
Developmental
Neuroscience
U of Miami
Medical Center



**Bettina
Winckler**
Associate
Professor
University of
Virginia

2014 Neuroscience Symposium

Neuron Regeneration Oct 27-28, 2014

October 27

Presented by the Neurosciences Institute

Arnold Kriegstein MD PhD

Genes expressed by human cortical radial glia help explain developmental and evolutionary cortical expansion

Anthony Koleske PhD

Adhesive and cytoskeletal control of dendrite development and stability

Bettina Winckler PhD

Doublecortin (DCX) binding to clathrin adaptors mediates endocytosis of adhesion receptor and is functionally implicated in DCX-dependent neuronal morphogenesis

Jenny Hsieh PhD

The Yin and Yang of Adult Hippocampal Neurogenesis

Annie Lin PhD

Epigenetic Regulations Underlying Cell Fate Transition in Adult Neurogenic Niches

October 28

Presented by Cell & Molecular Biology Program

Bruce Appel PhD

MicroRNA Regulation of Neural Precursor Maintenance and Specification

Phillip Horner PhD

Myelin plasticity after spinal cord injury: New targets to improve axonal conduction and function

Vance Lemmon PhD

Functional Genomics and Spinal Cord Injury

Additional October
28th sponsors:



October 27-28 2014

BSE 2.102

1604 Campus UTSA

*Parking available by arrangement.
See code at right for Preliminary
schedule and driving directions.*





Larry Abbott
William Bloor
Professor, Co-Director
Center for Theoretical
Neuroscience
Columbia University



John Beggs
Associate Professor
of Biophysics
University of Indiana



Dietmar Plenz
Section Chief,
Critical Brain
Dynamics, National
Institute of Mental
Health, NIH



Fidel Santamaria
Associate Professor
of Biology,
University of Texas
at San Antonio

2013 Neuroscience Symposium

Avalanches, Pools & Pitfalls: Power Law Dynamics in the Brain

Featuring (in alphabetical order):

Larry Abbott PhD

Multiple timescales in networks of spiking neurons

John Beggs PhD

The criticality hypothesis: How brains might optimize information processing

Dietmar Plenz PhD

Neuronal avalanches and coherence potentials:
Critical brain dynamics

Fidel Santamaria PhD

The interactions that slow you down: Power law adaptation in single neurons

December 6, 2013

9a - 5p

BSB 3.03.02

**1604 Campus
UTSA**



Uri Eden

Assistant Professor of
Math & Statistics
Boston University



Adrienne Fairhall

Associate Professor of
Physiology & Biophysics
University of Washington



Eugene Izhikevich

Co-Founder, Chairman &
CEO, Brain Corporation
Editor-in-Chief,
Scholarpedia



Eric Shea-Brown

Assistant Professor of
Applied Math
University of Washington



Todd Troyer

Assistant Professor of
Biology, University of
Texas San Antonio

2012 Neuroscience Symposium

Neural Dynamics & Coding

March 20, 2012

9a - 5p

BSE 2.102
1604 Campus
UTSA

Featuring (in alphabetical order):

Uri Eden PhD

*Characterizing neural spiking dynamics using point process
adaptive filtering*

Adrienne Fairhall PhD

From Neuronal Biophysics to Adaptive Coding

Eugene Izhikevich PhD

Large-Scale Modeling of the Brain

Eric Shea-Brown PhD

Cooperative Dynamics in Neural Circuits

Todd Troyer PhD

Stochastic Dynamics of One-Dimensional Model Neurons

**October 25, 2011
9a - 4p
BSE 2.102
1604 Campus
UT San Antonio**



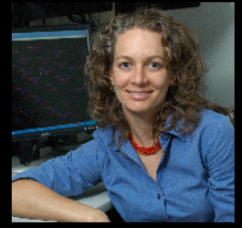
Karen Emmorey PhD
is Professor of Speech, Language and Hearing Sciences, and Director of the Laboratory for Language & Cognitive Neuroscience at San Diego State University.



Judith Kroll PhD
is Distinguished Professor of Psychology, Linguistics, and Women's Studies and Director of the Center for Language Science at Pennsylvania State University.



Lee Osterhout PhD
is Professor of Psychology and Director of the Cognitive Neuroscience of Language Lab at the University of Washington.



Nicole Wicha PhD
is Assistant Professor of Biology at UTSA and the Research Imaging Institute at UT Health Science Center at San Antonio.

2011 Neuroscience Symposium

The Bilingual Brain



Featuring (in alphabetical order):

Karen Emmorey PhD

The bimodal bilingual brain: When language is both spoken and signed

Judith Kroll PhD

Juggling two languages in one mind and brain: Evidence for inhibition of the first language

Lee Osterhout PhD

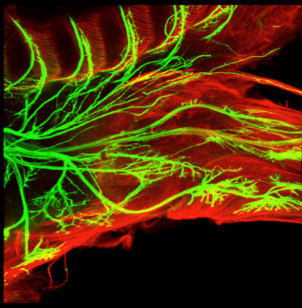
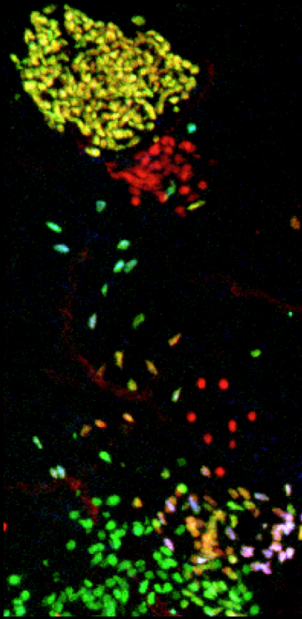
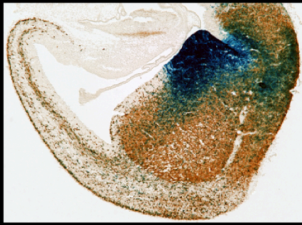
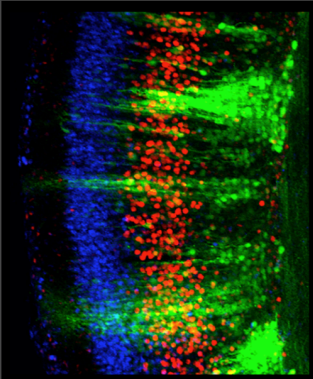
What the brain's electrical activity can tell us about how we learn (and forget) a second language

Nicole Wicha PhD

Getting to the meaning of words: Perspectives from the bilingual brain

THE UTSA NEUROSCIENCES INSTITUTE

Annual Scientific Symposium, April 9, 2010



Wiring the Nervous System from the Brain to the Spinal Cord

Speakers:

Pasko Rakic PhD

Kavli Institute, Yale School of Medicine

Neurogenetics of cortical development

Goichi Miyoshi

New York University School of Medicine

GABAergic interneuron lineages selectively sort into specific cortical layers during early postnatal development

Raj Awatramani PhD

Northwestern University

Making midbrain dopaminergic neurons

Gary Gaufo PhD

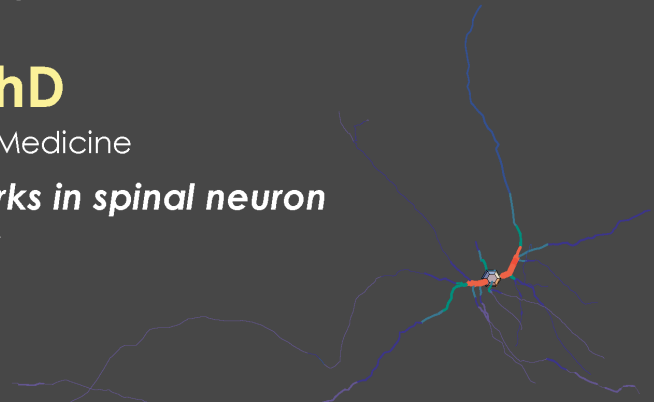
University of Texas San Antonio

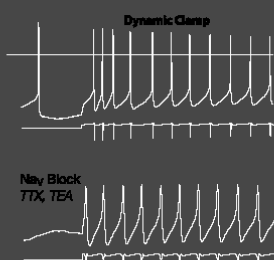
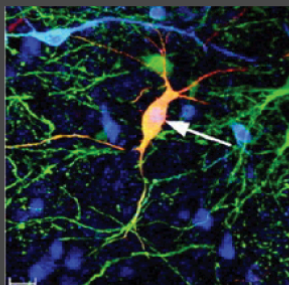
Temporal response of progenitors to morphogen signaling along the rostrocaudal axis

Jeremy Dasen PhD

New York University School of Medicine

Hox transcriptional networks in spinal neuron diversity and connectivity





THE UTSA NEUROSCIENCES INSTITUTE

Presents its First Annual Scientific Symposium, April 21, 2009

Ion Channels and Firing Patterns of Dopamine Neurons

Speakers:

Bruce Bean PhD

Harvard Medical School, Boston, MA

Ionic Currents Controlling Pacemaking of Dopaminergic Neurons in the Substantia Nigra and VTA

Carlos Paladini PhD

UTSA, San Antonio, TX

How NMDA Currents Induce Bursting in Dopaminergic Neurons

Jochen Roeper PhD

Goethe University, Frankfurt, Germany

ATP-Sensitive Potassium Channels in the Control of Burst Firing in Dopamine Neurons

James Surmeier PhD

Northwestern University, Chicago, IL

Pacemaking Without L-Type Calcium Channels in Dopaminergic Neurons

John Williams Ph.D

Oregon Health and Science University, Portland, OR

The Kinetics of Dopamine Transmission in the VTA

April 21, 2009

8:30am-4pm

BSE 2.102

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UTSA