

## Colloquia and Symposia at ION (2012.01-2012.12)

<b>Date</b>	<b>Name</b>	<b>Affiliation</b>	<b>Title</b>
2012.02.03	Feng-Quan Zhou	Johns Hopkins University School of Medicine, U.S.A	<i>Cytoskeletal mechanism of neural development and regeneration.</i>
2012.02.24	Istvan Mody	UCLA School of Medicine, U.S.A.	<i>A roadblock on the path to functional recovery after stroke.</i>
2012.03.02	Peter Stys	Hotchkiss Brain Institute, University of Calgary, Canada	<i>Advanced microscopy techniques for the study of myelinated nerve fibers</i>
2012.03.16	Luis de Lecea	Stanford University School of Medicine, U.S.A.	<i>Optogenetic control of arousal and hyper arousal</i>
2012.04.01	Melvyn Goodale	The University of Western Ontario, Canada	<i>Action without perception: What blind sight can tell us about the neural substrates of visuomotor control?</i>
2012.04.24	Koichi Kawakami	National Institute of Genetics Mishima, Japan	<i>Transposon-mediated genetic methods in zebrafish and their applications to the study of functional neural circuits</i>
2012.04.24	Tian-Ming Yang	National Institute of Mental Health, U.S.A.	<i>A neural mechanism of evidence accumulation underlying decision-making</i>
2012.04.25	Arndt Friedrich Siekmann	Max Planck Institute for Molecular Biomedicine, Germany	<i>Using zebrafish to study blood vessel development</i>
2012.05.02	Lu-Yang Wang	The University of Toronto, Canada	<i>Morphological and functional remodeling at the calyx of Held synapse</i>
2012.05.03	Kun-Liang Guan	University of California, San Diego, U.S.A.	<i>The mTOR and Hippo pathways in cell growth and organ size</i>
2012.05.08	Jaideep Bains	University of Calgary, Canada	<i>Synaptic adaptations and the response to stress</i>
2012.05.09	Jaideep Bains	University of Calgary, Canada	<i>Plasticity in homeostatic circuits</i>
2012.05.16	Peter Noakes	University of Queensland, Australia	<i>The roles of peripheral and central synaptic activity in the regulation of motor neuron development</i>
2012.06.01	Xiao-Hong Xu	UCSF, U.S.A.	<i>Genetic control of innate behaviors</i>
2012.06.05	Andrew Parker	University of Oxford, U.K.	<i>Cortical architectures for stereoscopic vision</i>
2012.06.08	Yi Yang	East China University of Science and Technology, China	<i>Genetically encoded sensor for imaging and manipulation of cellular activities</i>
2012.06.11	Patrick Kanold	University of Maryland, U.S.A.	<i>Circuits that regulate cortical development and plasticity.</i>
2012.06.21	Ming-Zhou Ding	University of Florida, U.S.A.	<i>Analyzing coherent brain networks with Granger causality</i>

2012.06.26	Tzumin Lee	University of Maryland, U.S.A.	<i>Origin of neuron diversity</i>
2012.07.06	Zuoshang Xu	University of Massachusetts Medical School, U.S.A.	<i>Role of TDP-43 in ALS and FTD: a gain or a loss of function?</i>
2012.07.12	Qi Wang	Georgia Institute of Technology/Emory University, U.S.A.	<i>Reading and Writing the Neural Code: Initial Steps toward Artificial Sensory Percepts</i>
2012.08.01	Ke-Ping Hu	Research Center for Pharmacology & Toxicology Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, China	<i>Autism Spectrum Disorder Rett Syndrome Protein MeCP2 Function Is Regulated by Phosphorylation</i>
2012.08.20	Lawrence L. Wald	Harvard Medical School, U.S.A.	<i>Technology for ultra-high field brain MRI and fMRI</i>
2012.09.04	Jie He	University of Cambridge, U.K.	<i>Development and function of neural circuits: two case studies</i>
2012.09.05	Xiao-Bing Gao	Yale University School of Medicine, U.S.A.	<i>An overview of hypothalamic functions: from homeostatic regulation to behavior</i>
2012.09.06	Xiao-Bing Gao	Yale University School of Medicine, U.S.A.	<i>Hypothalamic regulation of energy homeostasis</i>
2012.09.07	Hui Zong	University of Oregon, U.S.A.	<i>Understanding tumor cell maneuvers with MADM, a genetic mosaic system</i>
2012.09.11	Xiao-Bing Gao	Yale University School of Medicine, U.S.A.	<i>Hypothalamic mechanisms of sleep regulation</i>
2012.09.21	Gary Lewin	Bernstein Center for Computational Neuroscience, Germany	<i>The Molecules of touch</i>
2012.09.27	Daniel Felleman	The University of Texas Medical School at Houston, U.S.A.	<i>The representation of hue and orientation in areas V2 and V4 of macaque monkey visual cortex</i>
2012.10.15	Lyndon da Cruz	Moorfields Eye Hospital, NHS Foundation Trust, U.K.	<i>Towards the cure of human retina disease: the artificial retina / Bionic eye and stem cell transplantation approaches</i>
2012.10.23	Virginia M.-Y. Lee	University of Pennsylvania School of Medicine	<i>Transmission of alpha-synuclein in Parkinson's disease</i>
2012.10.23	John Q. Trojanowski	University of Pennsylvania School of Medicine, U.S.A.	<i>Tau Transmission and Therapeutics</i>
2012.10.29	Hugo J. Bellen	Baylor College of Medicine, U.S.A.	<i>Altered mitochondrial function and dynamics induces neurodegeneration</i>
2012.10.31	King-Wai Yau	Johns Hopkins University School of Medicine, U.S.A.	<i>Melanopsin Signaling in the Eye</i>
2012.11.01	Cheng-Chang Lien	National Yang-Ming University, Taipei	<i>Acid-Sensing Ion Channels in the Hippocampus</i>

2012.11.05	Yoshiyuki Kubota	Natl. Inst. Physiol. Sci. (NIPS), Okazaki, Japan	<i>Locally limited conductance of IPSCs elicited by fast spiking interneurons synapsing onto cortical pyramidal cells</i>
2012.11.07	Xiaohong Joe Zhou	University of Illinois Medical Center, U.S.A.	<i>Diffusion Imaging: New Technical Development and Applications</i>
2012.11.07	Changiz Geula	Feinberg School of Medicine, Northwestern University, U.S.A.	<i>Non-Human Primate Models Closely Recapitulate Human Neurodegenerative Conditions</i>
2012.11.08	Rolf Sprengel	Max Planck Institute for Medical Research, Germany	<i>Dissecting spatial knowledge from spatial choice by hippocampal NMDA receptor deletion</i>
2012.11.09	Z. Josh Huang	Cold Spring Harbor Laboratory, U.S.A.	<i>Genetic dissection of cortical GABAergic circuits: chandeliers light up the path</i>
2012.11.23	Alan Garen	Yale University, U.S.A.	<i>A transcription switch involving PSF protein and PSF-binding RNAs regulates cell proliferation, tumorigenesis and steroidogenesis</i>
2012.11.27	Dorit Ron	University of California, San Francisco, U.S.A.	<i>Cortico-striatal Mechanisms and Alcohol Abuse Disorders – A Role for BDNF</i>
2012.12.03	Samuel M. Wu	Baylor College of Medicine, U.S.A.	<i>Ion channels, synapses and neural circuits mediating visual function and dysfunction in the retina</i>
2012.12.04	Fred Gage	The Salk Institute, U.S.A.	<i>Neuronal Plasticity and Neural Diversity</i>
2012.12.05	Fred Gage	The Salk Institute, U.S.A.	<i>Modeling Human NeuroPsychiatric Disease in a Dish</i>
2012.12.07	Guan-Ping Gao	University of Massachusetts Medical School, U.S.A.	<i>CNS targeting by systemic gene delivery</i>
2012.12.14	Wen Li	University of Wisconsin-Madison, U.S.A.	<i>Sensory encoding of threat</i>
2012.12.21	Xiao-Hong Wan	RIKEN Brain Science Institute, Japan	<i>Human Intelligence and Expertise – Lessons from Experts in Board Games</i>

# *Institute of Neuroscience Mini-Course on Behavioral Neuroanatomy*

Speaker: Anna Roe Wang, Ph.D.

Professor, Vanderbilt University, U.S.A.

## Neural Basis of Human Behavior

2/27 Overview/Gross Anatomy

### Spinal Cord Tracts: Inputs & Outputs of the Brain

2/28 How do we move our limbs?

3/5 Question session 1/How do we feel touch, pain?

3/6 Reflex arc, How do we perceive posture, position?

### Brainstem & Cranial Nerves

3/12 Brainstem External/How do we move shoulders, tongue, eyes?

3/13 Question session 2/How do we feel touch on the face?

3/19 How do we smile, control viscera? Blood supply

### Sensory Systems

3/20 How do we hear? See?

3/26 How do we maintain balance? Smell & taste?

### Autonomic Systems

3/27 How do we stay awake? Autonomic nervous system

4/9 Question session 3/How do we regulate warmth, hunger, sex

### Limibic Systems

4/10 How do we feel emotions? Remember things?

4/24 Thalamus & cortex

### Extrapyramidal motor function

4/25 How do we perform automatic actions?

5/7 Question session 4/How do we learn & modify behavior?

### Higher order behavior

5/8 The computational brain

5/9 Visual behavior: perception, attention, action

# *Institute of Neuroscience Mini-Course on Cellular Neurophysiology*

Speaker: Samuel M. Wu, Ph.D.

Professor, Baylor College of Medicine, U.S.A.

- 10/23: Lecture 1: Ion movements in excitable cells, the Nernst-Planck equation, equilibrium potential, passive and active distribution of ions.
- 10/24: Lecture 2: Electrical properties of membrane, current-voltage relations, membrane rectification.  
Movement of ions across membrane, the constant field model and membrane permeability.
- 10/31: Lecture 3: The energy barrier model and the gate model for voltage- and time-dependent currents, voltage-clamp technique.
- 11/01: Lecture 4: Hodgkin-Huxley's voltage-clamp measurements of sodium and potassium currents in the squid axon, membrane excitation, and action potential propagation.
- 11/06: Lecture 5: Gating currents, gating current and channel inactivation.
- 11/07: Lecture 6: Whole-cell voltage clamp analysis of potassium, calcium and sodium currents. Unitary currents and macroscopic currents.
- 11/13: Lecture 7: Molecular structure of voltage- and ligand-gated channels, mechanisms of ion selectivity.
- 11/14: Lecture 8: Statistical analysis of channel population behavior, nonstationary noise analysis.
- 11/27: Lecture 9: Probability density function of channel open and close times, and channel gating.
- 11/28: Lecture 10: Stochastic principles of single channel behavior, transition probability of channel gating, the Chapman-Kolmogorov equation.
- 12/04: Lecture 11: Stochastic analysis of the two-state channels, rate coefficients and the infinitesimal matrix, channel dwell time and rate coefficients.
- 12/05: Lecture 12: Stochastic analysis and general rules for n-state single channels, stationary noise analysis.
- 12/11: Lecture 13: Single channel analysis of BK channels, cGMP-gated channels and HCN channels.
- 12/12: Lecture 14: Single channel analysis of voltage- and ligand-gated channels, neurotransmitter-gated channels.

# *Institute of Neuroscience Mini-Lectures*

Speaker: Xiao-Bing Gao, Ph.D.

Associate Professor, Yale University School of Medicine U.S.A.

## **Functions of the hypothalamus**

09/05: Lecture 1: An overview of hypothalamic functions: from homeostatic regulation to behavior

09/06: Lecture 2: Hypothalamic regulation of energy homeostasis

09/07: Lecture 3: Hypothalamic mechanisms of sleep regulation

Speaker: Man-Yuan Long, Ph.D.

Professor, University of Chicago, U.S.A.

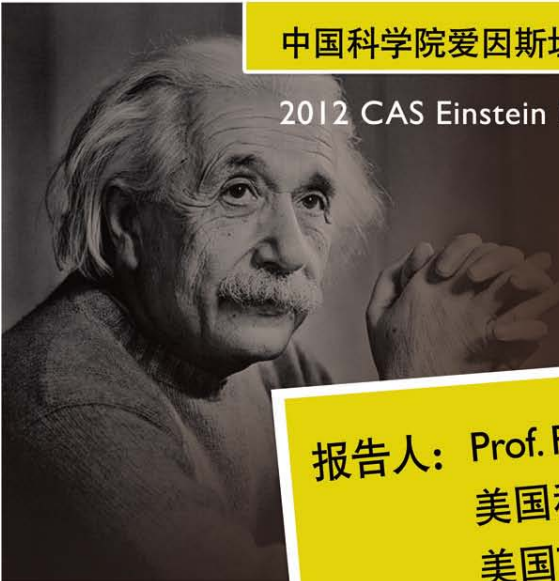
## **Concepts of evolution and the origin of new genes**

12/18: Lecture 1: Meanings of Evolution

12/18: Lecture 2: Reconstruction of Evolutionary Process and detecting underlying forces

12/19: Lecture 3: Origins of New Genes

12/19: Lecture 4: Evolution of Genetic Basis underlying Brains and Behaviors



中国科学院爱因斯坦讲席教授计划学术讲座  
2012 CAS Einstein Professorship Lectures



**报告人: Prof. Fred Gage**  
美国科学院院士  
美国The Salk Institute教授

**报告题目1: Neuronal Plasticity and Neural Diversity**

报告时间: 2012年12月4日下午15:30  
报告地点: 岳阳路320号生科大楼礼堂  
主持人: 蒲慕明研究员

**报告题目2: Modeling Human NeuroPsychiatric Disease in a Dish**

报告时间: 2012年12月5日下午15:30  
报告地点: 岳阳路320号生科大楼礼堂  
主持人: 蒲慕明研究员

 中科院上海生科院神经科学研究所  神经科学国家重点实验室

# 纪念张香桐先生学术研讨会 暨张香桐先生铜像揭幕仪式

会议时间：2012年11月26日-11月27日

会议地点：上海市岳阳路320号

会议日程：

## 第一部分：学术报告

11月26日8:30-18:00 11月27日8:30-10:00 生科大楼礼堂

Session 1: Progress in Signal Processing

Session 2: Membrane Proteins and their Functions

Session 3: Progress in Pain Research

Session 4: Mechanisms of Brain Disorders

Session 5: Brain Disorder and Translational Research

## 第二部分：老职工、毕业学生交流座谈会

11月27日10:00-11:30 神经所大楼430会议室

## 第三部分：张香桐先生铜像揭幕仪式

11月27日11:45-12:15 新实验大楼门厅



### 张香桐先生简介：

张香桐（1907-2007），中科院资深院士。回国后曾任原中国科学院上海生理研究所研究员；原中国科学院上海脑研究所研究员、所长、名誉所长；中国科学院神经科学研究所名誉所长。他是国际上公认的树突生理功能研究的先驱者之一，他关于猴运动皮层肌肉代表性、肌肉神经传入纤维的分类及皮层丘脑回路的研究也都是经典性的工作。他还是我国针刺麻醉机制研究的主要学术带头人之一，对针刺麻醉机制的了解做出了重要贡献。