

# Samuel J. Sober, Ph.D.

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## Research Experience

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO ..... San Francisco, CA  
**Postdoctoral Fellow** 4/05-present

*Advisor: Dr. Michael S. Brainard*

Postdoctoral research on the physiology of motor control and motor learning in songbirds.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO ..... San Francisco, CA  
**Graduate Student** 12/00-2/05

*Advisor: Dr. Philip N. Sabes*

Doctoral research on the psychophysics of motor planning and multisensory integration.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO ..... San Francisco, CA  
**Graduate Student** 6/00-11/00

*Advisor: Dr. Stephen G. Lisberger*

Designed and conducted experiments on the effects of attention on the oculomotor system. Assisted in acute physiological studies investigating the basis of motion selectivity in primate area MT.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO ..... San Francisco, CA  
**Graduate Student** 1/00-5/00

*Advisor: Dr. Michael M. Merzenich*

Mapped auditory receptive fields in rodent primary auditory cortex. Developed software for auditory receptive field mapping. Analyzed patterns of neural synchrony between different sites across the auditory map.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO ..... San Francisco, CA  
**Graduate Student** 9/99-12/99

*Advisor: Dr. Herwig Baier*

Investigated the psychopharmacology of oculomotor responses in wild-type and mutant zebrafish. Developed software for quantifying oculomotor responses.

UNIVERSITY OF WISCONSIN - MADISON ..... Madison, WI  
**Undergraduate Research Assistant** 6/96-8/96

*Advisors: Drs. William W. Lytton and Dwayne S. Yamasaki*

6/97-5/98

Designed and programmed simulations of the effects of cortical lesions on the information-processing properties of surviving neurons.

## Education

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO ..... San Francisco, CA  
**Graduate Program in Neuroscience** 9/99-2/05

Doctoral thesis research on human motor planning and sensory integration.

## Education (continued)

MARINE BIOLOGICAL LABORATORIES.....	Woods Hole, MA
<b>Methods in Computational Neuroscience</b>	8/04
Intensive summer course	
KYUNGHEE UNIVERSITY.....	Seoul, South Korea
<b>Henry Luce Visiting Scholar</b>	9/98-6/99
Independent study on the clinical practice and physiological bases of acupuncture.	
WESLEYAN UNIVERSITY.....	Middletown, CT
<b>B.A., Neuroscience &amp; Behavior</b>	9/94-6/98

## Teaching Experience

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO.....	San Francisco, CA
<b>Graduate Teaching Assistant</b>	1/04-2/04
Led math review sessions for a course in Computational Neuroscience.	
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO.....	San Francisco, CA
<b>Graduate Teaching Assistant</b>	9/01-12/01
Led recitation sections and graded assignments for a clinical course in neuroscience.	

## Professional Activities

Reviewer, Experimental Brain Research  
Member, Society for Neuroscience  
Member, Society for the Neural Control of Movement

## Honors

Helen Hay Whitney Foundation Research Fellowship .....	2006-present
NSF Graduate Research Fellowship.....	1999-2002
Henry Luce East Asian Scholar .....	1998-1999
George H. Acheson and Grass Foundation Prize in Neuroscience.....	1998
(Awarded through Wesleyan University to an excellent student in the Neuroscience & Behavior major.)	
Phi Beta Kappa (national honors society) .....	1998
Howard Hughes Summer Research Fellowship .....	1998

## Publications

**Sober SJ** and Brainard MS. Adult Birdsong is Actively Maintained by Error Correction. *Nature Neuroscience*, in press.

**Sober SJ**, Wohlgenuth MJ, and Brainard MS (2008). Central Contributions to Acoustic Variation in Birdsong. *J. Neuroscience*, 28(41):10370-9.

**Sober SJ** and Sabes PN (2005). Flexible Strategies for Sensory Integration during Motor Planning. *Nature Neuroscience*, 8(4):490-7.

## Publications (continued)

**Sober SJ** and Sabes PN (2003). Multisensory Integration During Motor Planning. *J. Neuroscience* 23(18):6982-92.

Lytton WW, Williams ST, **Sober SJ** (1999). Unmasking unmasked: Neural dynamics following stroke. *Progress In Brain Research* 121:203-218.

Lytton WW; Stark JM; Yamasaki DS; **Sober, SJ** (1999). Computer models of stroke recovery: Implications for neurorehabilitation. *The Neuroscientist* 5:100-111.

**Sober SJ**; Stark JM; Yamasaki DS; Lytton WW (1997). Receptive field changes following stroke-like cortical ablation: a role for activation dynamics. *J. Neurophysiology* 78:3438-3443.

In preparation:

**Sober SJ** and Brainard MS. Adult Song Learning and the Statistics of Sensory Experience. *In preparation.*

Wohlgemuth MJ, **Sober SJ**, and Brainard MS. Linked Control of Syllable Sequence and Phonology in Birdsong I: Behavioral Evidence. *In preparation.*

Wohlgemuth MJ, **Sober SJ**, and Brainard MS. Linked Control of Syllable Sequence and Phonology in Birdsong II: Neural Implementation. *In preparation.*

## Conference Abstracts

**Sober SJ** and Brainard MS (2008). Adult Birdsong is Actively Maintained by Error Correction. *Annual Meeting, Society for Neuroscience* (Poster).

**Sober SJ** and Brainard MS (2008). Sensorimotor Adaptation in Adult Songbirds. *Annual Meeting, Society for the Neural Control of Movement* (Talk).

**Sober SJ**, Wohlgemuth MJ, and Brainard MS (2007). Central Contributions to Acoustic Variability in a Songbird. *Annual Meeting, Society for Neuroscience* (Poster).

Wohlgemuth MJ, **Sober SJ** and Brainard MS (2007). Song Coding in the Robust Nucleus of the Arcopallium (RA) of the Bengalese Finch. *Annual Meeting, International Society for Neuroethology* (Poster).

**Sober SJ** and Sabes PN (2004). Learning a Coordinate Transformation Drives Changes in Sensory Integration. *Annual Meeting, Society for Neuroscience* (Poster).

**Sober SJ** and Sabes PN (2003). Task- and Feedback-Dependent Sensory Integration During Reach Planning. *Annual Meeting, Society for Neuroscience* (Poster).

**Sober SJ** and Sabes PN (2003). Sensory Integration During Reach Planning. *Annual Meeting, Society for the Neural Control of Movement* (Poster).

**Sober SJ** and Sabes PN (2001). The Relative Contributions of Vision and Proprioception to Joint Angle Estimation and Motor Planning. *Annual Meeting, Society for Neuroscience* (Poster).

**Sober SJ**; Stark JM; Yamasaki DS; Lytton WW (1997). Activation Dynamics and Early Recovery Following Focal Cortical Lesion. *Annual Meeting, Society for Neuroscience* (Poster).