

Short Course On
**SIMULATION AND RESEARCH DESIGN
IN NEUROBIOLOGY**

Los Angeles, California — May 29-31, 1988

organized by the

**BIOMEDICAL SIMULATIONS RESOURCE
UNIVERSITY OF SOUTHERN CALIFORNIA**

under the sponsorship of the

**BIOMEDICAL RESEARCH TECHNOLOGY PROGRAM
DIVISION OF RESEARCH RESOURCES
NATIONAL INSTITUTES OF HEALTH**

Organizer: George P. Moore, Professor of Biomedical Engineering

Tel: (213) 743-3648

May 29-31, 1988

Schedule for Sunday May 29, 1988

Seaver Science Auditorium

9:30 am Session #1: Modeling the Experiment
(Discussion of Hubel & Wiesel, 1963)

Break

10:30 Session #2: Modeling the Results
(Discussion of Georgopoulos et al. 1986)

Lunch Break

1:30 pm Current Research #1:

Spatial Distribution of Motor Unit Fibers in Muscle
Sue C. Bodine, Department of Kinesiology, UCLA

Spinal Cord Distribution of Sensory Afferent Terminals
H. Richard Koerber, Department of Neurobiology &
Behavior, SUNY Stony Brook

Break

3:30 Tutorials

1) Hubel & Wiesel Program (Olin Hall 114, Ms Gu)

2) Georgopoulos Program (Olin Hall 116, Mr. Shadmehr)

4:30 Repeat Tutorials

Dinner Break

6-9 pm -----Computer Laboratory, Olin Hall, Rooms 114 and 116-----

All participants may pursue their own investigations
using our programs. Teaching Assistants will be
available for consultation.

Mr. Peter Kim will supervise the laboratory

Program for Monday May 30, 1988

Seaver Science Auditorium

8:30 am Session #3: Modeling the Methods
(Discussion of Henneman, 1985)

9:30 Reprise: Discussion of Hubel & Wiesel; Georgopoulos
Break .

10:30 Session #4: Modeling the Test
(Discussion of Castellucci & Kandel, 1976)

Lunch Break

1:30 pm Reprise: Bodine, Koerber

2:30 Current Research #2:

Synergies

Paul Hansen, Human Movement Studies, University of Oregon

Effects of Lesions on Motoneuron Population Behavior
Randy Powers, Physiology & Biophysics, University of Washington

Break

3:30 Tutorials

1) The Henneman Program (Olin Hall 114, Mr. Lindquist)

2) The Castellucci & Kandel Program (Olin Hall 116, Mr. Wang)

4:30 Repeat Tutorials

Dinner Break

6-9 pm Computer Laboratories
Olin Hall, Rooms 114, 116

Program for Tuesday May 31, 1988

Seaver Science Auditorium

9:00 am Reprise: Henneman, Castellucci & Kandel

10:00 Current Research #3

A Comprehensive Model of the Retina
Jeff Teeters, Computer Science, USC

White Noise Models of the Visual Cortex
Friedemann Krause/ Paco Gonzalez, Physics Dept.
University of Marburg

Lunch Break

1:30 pm Tutorials

- 1) Neural Simulation Software
- 2) The Sampling Theorem
- 3) Random Numbers and Applications

2:30 General Discussion

4:00 Reception, Faculty Center

**Short Course '88
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