

BIOMEDICAL SIMULATIONS RESOURCE  
UNIVERSITY OF SOUTHERN CALIFORNIA

1991 Workshop On

**MODELS OF COMPLEX RESPIRATORY DYNAMICS  
IN SLEEP AND WAKEFULNESS**

May 11, 1991

Anaheim Holiday Inn  
1850 S. Harbor Blvd.  
Anaheim, California

Sponsored by

BIOMEDICAL RESEARCH TECHNOLOGY PROGRAM  
NATIONAL CENTER FOR RESEARCH RESOURCES  
NATIONAL INSTITUTES OF HEALTH

Chairman and Organizer:  
Michael C.K. Khoo, Ph.D.  
Associate Professor, Biomedical Engineering

# Models of Complex Respiratory Dynamics in Sleep and Wakefulness

Saturday, May 11, 1991

7:30 Registration

8:00 Introduction

Michael Khoo

University of Southern California

## Morning Session:

8:15 Spectral Analysis of Ventilation

Frederick Bennett

Worcester Polytechnic Institute

8:45 Analysis of Ventilation  
from Nonlinear Dynamics

Jacob DeGoede

Leiden University

9:15 Nonlinear Dynamics of Cardio-  
Pulmonary Responses

Stanley Yamashiro

University of Southern California

9:45 **Coffee Break**

10:15 Entropy as a Complexity Measure  
of Deterministic Respiratory Patterns

Charles Webber, Jr.

Loyola University of Chicago

10:45 Rescaled Range Analysis of  
Resting Respiration

Bernard Hoop

Massachusetts General Hospital

11:15 The Limit Cycle Oscillator: A Model  
for the Respiratory Oscillator

Frederic Eldridge

Univ. of North Carolina at Chapel Hill

11:45 Models of Respiratory Variability

Eugene Bruce

Case Western Reserve University

12:15 **Lunch Break**

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