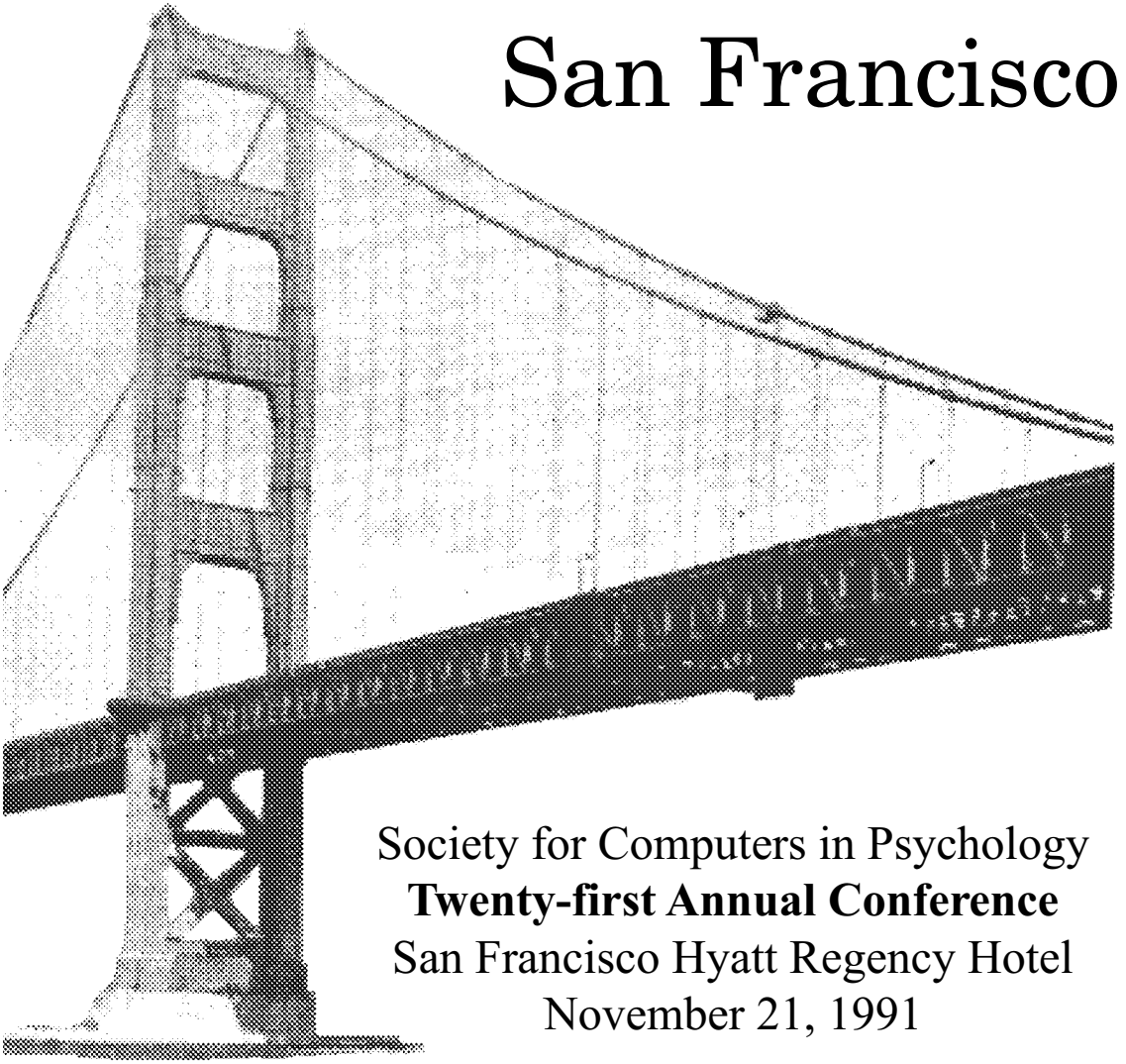
SCiP

San Francisco



Society for Computers in Psychology
Twenty-first Annual Conference
San Francisco Hyatt Regency Hotel
November 21, 1991

Presentation Schedule

Pacific Concourse N

7:45 LABORATORY SYSTEMS
Chaired by Edward Carterette

MEL as a research environment: *W. Schneider*
SuperLab as a research environment: *J. Haxby, et al.*
A music analysis research environment: *R. Kendall & E. Carterette*
Setting up computer networks: *L. Gindler & F. Bremner*
Correcting real-time programs: *Y. Maksik & R. Church*
Video tape tools for data logging: *Vlugt, Kruk, Erp & Geuze*
Key peck transduction devices: *R. Allan*
Joystick and graphics utilities for studying behavior: *D. Washburn & D. Rumbaugh*

10:00 ANALYTICAL AND VISUALIZATION TOOLS
Chaired by Darrell Butler & John Flowers

An analytical workbench: *S. Reidbord & D. Redington*
Modeling dynamical systems with PHASER: *J. Townsend*
Sequential information tool: *M. Pevey, J. McDowell & R. Kessel*
A new kind of series analysis: *H. Broadbent & Y. Maksik*
Tool for analyzing response sequences: *D. Washburn*
Will dynamic displays help: *F. Marchak*
Sound as a data descriptor: *J. Flowers & T. Hauer*
Discussion: *D. Butler*

12:40 SIMULATION OF PSYCHOLOGICAL DATA
Chaired by John Flowers & Darrell Butler

Analysis and visualization packages review: *Marchak & Zulager*
Review of some modeling packages: *Bremner & Yost*
Modeling behavior with a spreadsheet: *C. R. Gallistel*
Discussion: *R. Church*

8:00 DADiSP A data acquisition and analysis environment.

8:45 LabVIEW An iconic data acquisition and analysis environment.

9:30 Hewlett Packard An iconic data acquisition and analysis environment.

Pacific Concourse M

7:45 COURSEWARE APPLICATIONS
Chaired by Margaret Anderson

Introduction and overview: *M. Anderson*
Software for training psychologists: *M. Isaacs, et al.*
Software for teaching physiological psychology: *Rosen & Petty*
Software for teaching introductory psychology: *S. Ransdell*
Spreadsheets as teaching tools: *D. Eamon*
An intelligent resource library for teaching: *R. Ray*
A statistical simulator for teaching: *D. Bradley, et al.*
HyperCard-based theory evaluation: *A. Lee*
Discussion: *M. Anderson*

9:45 Vendor Exhibition and Refreshment Break Pacific Concourse O

10:00 TOOLS FOR COURSEWARE DEVELOPMENT
Chaired by Peter Hornby

Introduction and overview: *P. Hornby*
Using Course Builder for developing courseware: *C. McDade*
Using Linkway for developing courseware: *D. Cook, et al.*
Using Authorware Professional for developing courseware: *C. Wolfe*
Discussion: *P. Hornby*

11:00 TOOLS FOR COGNITIVE ANALYSIS
Chaired by Cyndi McDaniel

Tool for semantic analysis: *E. Lopez & J. Theios*
Tool for decision making analysis: *S. Carter & D. Walsh*
Tool for language analysis: *A. Gervasio, J. Taylor & S. Hirshfield*
Tool for the analysis of cognitive complexity: *A. Shmelyov*

12:00 Poster Session K - O Concourse - Chaired by Sarah Ransdell (Lunch Break)

Video game to cognitive: *E. Hunt & W. Tierre*
HyperCard glossaries: *Martin & Growney*
Measurement of cheating: *S. Link & R. Day*
Computer grader: *M. Mills*
Psychiatric treatment planner: *C. Stout*
Iconic personality simulator: *L. Brock*
Speech timing & the brain: *E. Friedman et al.*
LabVIEW research environment: *H. Treat*
PC VGA Tachistoscope: *R. Haussmann*

12:40 INFORMATION COLLECTION AND MANAGEMENT
Chaired by Howard Kaplan

Subject pool management: *M. Cardillo & D. Butler*
Impaired driver treatment programs: *R. Hays, et al.*
Rehabilitation medicine: *C. Merbitz*
Drug abuse liability testing: *H. Kaplan*
Neuropsychological diagnosis: *N. Brand*
Round table discussion: *H. Kaplan*

2:00 Vendor Exhibition and Refreshment Break Pacific Concourse O

2:20 INVITED SPEAKERS Pacific Concourse N

¥ DAVID RUMELHART - A statistical account of learning and generalization

¥ MICHAEL POSNER - Neural imaging of cognitive functions

¥ JONATHAN VAUGHAN - The dimensions of computing

5:25 - 8:00 Impromptu Special Interest Groups Pacific Concourse K, L, M, N (Dinner Break)

8:00 JMP An exploratory data analysis environment.

8:45 MATLAB Comprehensive interactive analysis and modeling tools.

9:30 Mathematica *S. Gronlund*

Presentation Schedule

Pacific Concourse L

7:45 **JMP** An exploratory data analysis environment.

8:30 **SYSTAT** A comprehensive statistics, graphics, and data management package.

9:15 **Extend** An iconic modeling package for analysis and presentation.

Pacific Concourse K

7:45 **MATLAB** Comprehensive interactive analysis and modeling tools.

8:30 **Jandel** Scientific graphing and curve fitting software.

9:15 **Hewlett Packard** An iconic data acquisition and analysis environment.

9:45 Vendor Exhibition and Refreshment Break Pacific Concourse O

10:00 **LabVIEW** An iconic data acquisition and analysis environment.

10:45 **SuperLab** An experiment generator for cognitive research.

11:30 **Bitnet** *P. Hornby & M. Anderson* An introduction to the uses of electronic mail for psychologists.

10:00 **MEL** An experiment generator for cognitive research.

10:45 **DADiSP** A data acquisition and analysis environment.

11:30 **Drawing Packages** *R. Bevins* How to generate presentation graphics.

12:00 Poster Session K- O Concourse (Lunch Break)

12:40 **STATISTICA** *M. Pevey* Integrated database analysis and graphics package for the PC.

1:25 **HyperCard** *C. McDaniel* Getting started with HyperCard in Psychology.

12:40 **Laboratory in Memory and Cognition** *S. Ransdell* EDUCOMM award-winning psychology software.

1:25 **Computing in the USSR** *V. Pokhilko & A. Shmelyov*

2:00 **Viruses** *W. Schneider* Appropriate cost/benefit protection.

2:00 Vendor Exhibition and Refreshment Break Pacific Concourse O

2:20 INVITED SPEAKERS

5:25 - 8:00 Impromptu Special Interest Groups Pacific Concourse K, L, M, N (Dinner Break)

8:00 **Jandel** Scientific graphing and curve fitting software.

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9:30 **MEL** An experiment generator for cognitive research.

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8:45 **SYSTAT** A comprehensive statistics, graphics and data management package.

9:30 **Business Meeting**

10:00 **Combined Users Groups**

Welcome to this year's **SCiP** meeting. I hope it will provide you with tools and technologies which will help you carry out your research.

Bill Palya, Program Chair
Jacksonville State University

Feedback

I would like to ask your help in enabling **SCiP** to better fit your needs. Please fill out the feedback forms available with each session and the one covering the conference as a whole. I accept that it will be an extra effort, but it will help us to better serve your needs. Information relating to specific individuals will be available to **only** the individual involved and only if specifically requested. Also, consider attending the Business Meeting. Next year's program will benefit by the input received at that time. In the absence of data, program chairs can only make educated guesses. A token honorarium will be provided for your effort by awarding an Erlbaum book for each of three drawings from the completed forms.

Demonstrations / Tutorials / Interactive Help Sessions

Tutorial / help sessions were by far the most requested addition to the program. The products being demonstrated represent some of the most powerful, easy to use, and affordable software available. In general, each session will overview the software and what it can be used for; then provide examples of doing various things with it; and will end with a context-dependent period, based on the audience in the room at the time. The goal is to provide researchers with state of the art computer tools, enable beginners to reach Òcritical massÓso that they can begin to use the packages productively without the up-front cost of comprehending the paradigm as portrayed by the manual; and additionally, to give advanced users some insights into using the very powerful but esoteric features.

Awards

There will be several awards announced in the Business Meeting. The SCiP/Erlbaum Distinguished Paper Award will be given to the two best papers presented at **SCiP** this year. We would like to more formally recognize the effort it takes to present complex material in an easy to assimilate manner.

Program Committee

I would like to thank the members of the Program Committee for their willingness to give up the time necessary to see to it that this year's **SCiP** meeting was a success.

Doris Aaronson	Ed Carterette	Bud Gardner	Roy Lachman	Frank Marchak
Peggy Anderson	Russ Church	Paula Goolkasian	Dick Lehman	Claudia McDade
Jim Averill	Susan Dumais	Peter Hornby	Michael Levy	Cyndi McDaniel
Fred Bremner	Dave Eckerman	Howard Kaplan	Steve Link	Sarah Ransdell
Darrell Butler	John Flowers	Bob Kessel	Bill Maki	Mike Yost

Active Session Chairs

This year, session chairs have been asked to take a more active role in coordinating the papers within each session. This was done in order to provide more feedback to the authors and to better coordinate the material presented in the oral presentations. I thank each of the chairs for their extra efforts.

Registration

Thursday from 7:30 am until 3:30 pm

Please remember that smoking is not permitted in the meeting rooms

LABORATORY SYSTEMS

7:45 - 9:45 Pacific Concourse N

Chaired by: Edward Carterette, University of California, Los Angeles

7:45 Pacific Concourse N

MEL: A Cognitive Experiment Generator

Walter Schneider *University of Pittsburgh*
schneider@pittvms

The Micro Experimental Laboratory (MEL) software system is discussed and demonstrated. The MEL system is an integrated software system for cognitive research. The researcher fills in forms and an automatic code generator produces the experimental program. The system can run the coded experiment with millisecond precision and analyze the resulting data. It can perform most reaction time, questionnaire, and text comprehension experiments with little programming. It operates on IBM PCs and Apple MAC computers. Methods to train and support the MEL system in different size institutions is discussed.

8:00 Pacific Concourse N

SuperLab: Flexible Macintosh Software for Psychological Research

James V. Haxby *National Institutes of Health,*
Raja Parasurama *Catholic University,*
& Hisham Abboud *Cedrus Corporation*
haxby@alw.nia.nih.gov

SuperLab is a general purpose psychological research package for the Macintosh. SuperLab offers a highly flexible format for presenting visual or auditory stimuli and recording responses from the keyboard or from switches connected to an I/O board. Timing with millisecond precision uses Macintosh internal timers. Data are recorded in a file format that can be read by all Macintosh databases, statistics, and graph-making applications. A Macintosh user interface makes SuperLab accessible to users of all levels of computer ability.

8:15 Pacific Concourse N

Convergent Methods in Psychomusical Research Based on Integrated, Interactive Computer Control

Roger Kendall & Edward Carterette
University of California - Los Angeles

Much of what we learn from an experiment is dependent on what we ask of the subjects and how we ask it. Most music perception and cognition research is implemented using a single methodology; recently questions regarding the validity and generalizability of such a limited approach have been raised, particularly regarding such complicated theoretical constructs as musical tonality. We propose that a useful technique is to converge on the answer to experimental questions by applying multiple methodologies.

8:30 Pacific Concourse N

Local Lab and Campus Networks: How They Work and Their Costs and Benefits

Lawrence H. Gindler & Frederick J. Bremner *Trinity University*
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Networking is both a simple and a complex topic. The end user simply sees disks, printers, and other connections that are not directly connected to the local machine. What is behind these connections is a combination of cables, hardware, software, and standards that is very complex. The purpose of this paper is to explain in simple terms the infrastructure of a network. Both Apple and IBM networks will be covered. The presentation will also detail when a network is or is not a cost-effective solution.

8:45 Pacific Concourse N

A System for Automatically Analyzing and Correcting Real-Time Experimental Control Programs

York A. Maksik & Russell M. Church
Brown University
py701032@brownvm

A real-time experimental control program must sense multiple input devices, perform conditional calculations, and control multiple output devices. A system will be presented that automatically analyzes the time required by a real-time experimental control program, and automatically corrects it to provide temporal accuracy limited only by the cycle time and capabilities of the hardware. This state-transition system uses clock-based interrupts instead of the more familiar event-based interrupts or simple polling.

9:00 Pacific Concourse N

PC-Protocol - A System for Fast and Reliable Acquisition of Multiple Ethological Records

M. J. van der Vlugt *iec ProGAMMA,* M. R. Kruk, A. M. M. van Erp *University of Leiden*
& R. H. Geuze *University of Groningen*

PC-Protocol is a system for collecting and correcting ethological data. Its hardware and software enable the easy encoding of complex behavioral interactions from video recordings. It is especially designed to improve accuracy, reliability and training standards in encoding behavior. The system supports several basic analyses of collected data. PC-Protocol operates with both North American and European video signals.

9:15 Pacific Concourse N

Technologies to Reliably Transduce the Topographical Details of Pigeon Pecks

Robert W. Allan *Lafayette College*

Pigeon's pecking has long been a subject of interest in behavioral research, with the response typically being viewed as unitary. Recent experiments using computer-controlled devices have revealed that this response is at least bipartite in character with beak-opening and response-location (head transport) components. In addition, experimental work has demonstrated that these response components may be separately influenced and controlled by respondent and operant conditioning procedures. The detailed topographic analysis and technology that has emerged may provide a background for similar work with other behavior systems.

9:30 Pacific Concourse N

Testing Primates with Joystick-based Automated Apparatus: A User's Guide

David A. Washburn & Duane M. Rumbaugh *Georgia State University*
psydaw@gsuvm1

A video-task testing paradigm is described in which subjects (human and nonhuman primates) respond to computer-generated stimuli by manipulating a joystick. In the 4 years that this test system has been used, much has been learned both about psychology and about the implementation and use of automated testing technology. Suggestions, caveats, and concerns -- many of which were unanticipated -- are discussed in the context of training and reliability data that are presented.

COURSEWARE APPLICATIONS

7:45 - 9:45 Pacific Concourse M

Chaired by: Margaret Anderson, State University of New York at Plattsburg

7:45 Pacific Concourse M

Introduction and Overview

Margaret Anderson *SUNY-Plattsburgh*
andersonmd@snyplava

7:50 Pacific Concourse M

School Psychologist Simulation: A Microcomputer Program to Aid in the Training and Evaluation of Graduate Level School Psychologists

Morton Isaacs, Virginia Costenbader, & Margery Reading-Brown *Rochester Institute of Technology*
mjigss@ritvax

This HyperCard simulation allows graduate students and practitioners in the field to experience information and events as they are encountered in the school setting, and to practice their skills on a variety of cases. An auxiliary program permits the instructor to modify all aspects of the simulation, and allows modifications necessary to fit specific state and district requirements while maintaining the essential common elements.

8:05 Pacific Concourse M

Computer-Aided Instruction in a Physiological Psychology Course

Ellen F. Rosen *College of William and Mary* & Linda C. Petty *Hampton University*

A simulation/tutorial sequence was introduced into a large (N=40) undergraduate physiological class to provide a laboratory experience. The college computer center managed the IBM/PC-type networked facility. The sequence includes neuroanatomy, stereotaxic surgery/histology/electrical self-simulation, and use of the polygraph. All the software was off-the-shelf except for the stereotaxic surgery/histology/self-stimulation package which was written by the authors using *ToolBook* running under *Window*s.

8:20 Pacific Concourse M

Incorporating Educational Software into Large Introductory Psychology Lectures and Labs

Sarah Ransdell *New College*
dsdaiam@cfrvm

A set of 15 computer activities for large introductory psychology courses is demonstrated for both **classroom** and **laboratory** use. Emphasis will be placed on using this software, and others of its kind, to stimulate discussion during class while supporting existing lecture-format material. Other benefits discussed will include providing "dual-coding" of difficult course content and making **efficient** use of simulations and tutorials that are based on the educational needs of introductory psychology students.

8:35 Pacific Concourse M

Data Generation and Analysis Using Spreadsheets

Douglas B. Eamon *University of Wisconsin - Whitewater*
eamond@uwwvax.uww.edu

Modern spreadsheets have extensive function libraries and powerful macro capabilities. These features make the spreadsheet a useful and convenient tool that can often replace special purpose programs for generating data for student analysis and interpretation. Statistical analyses that include elaborate intermediate results can also be performed.

8:50 Pacific Concourse M

An Artificially Intelligent Hyper-Media Resource Library for Descriptive Behavioral Research

Roger D. Ray *Rollins College*
rdray@rollins

The Behavioral Systems Resource Library is a set of integrated modules for supplementing a variety of courses in descriptive methodology and applications. It is a HyperCard and compiled Basic system for data analysis and management, plus an artificially intelligent tutoring system for delivering text and interactive video or animated simulations. The presentation focuses especially on: 1) the concept and power of Resource Libraries for course applications, 2) the utility of HyperCard and the Behavioral Systems approach for artificially intelligent tutoring, and 3) advances in context-dependent animated simulations of animal learning.

9:05 Pacific Concourse M

A Simulation Laboratory for Statistics

Drake R. Bradley, Robert L. Hemstreet, & Susan Ziegenhagen
Bates College

A simulation program, **Datasim**, is described. With it students can conduct laboratory assignments in statistics. Simulations can be performed to demonstrate sampling distributions, the central limit theorem, Type I and Type II decision errors, the power of a test, the effects of violating assumptions on the outcomes of statistical tests, partial correlation, regression to the mean, heteroscedasticity, the partitioning of error terms in split-plot designs, and so on. Several such applications are illustrated.

9:20 Pacific Concourse M

Testing Learning Theories Using HyperCard

Adrienne Y. Lee *University of Colorado*
lee_a@clipr.colorado.edu

This paper describes how to use HyperCard to develop a simplified tutoring system whose principles are based on a learning theory. An experimental evaluation of a genetics tutoring system is described. Learning was studied by examining immediate versus delayed feedback after an error was made. Tutoring systems are shown to aid in psychological studies of learning because experimental variables can be easily manipulated. HyperCard provides a good vehicle for tutoring system development, since no extensive programming skills are required.

9:35 Pacific Concourse M

Discussion

Margaret Anderson *SUNY-Plattsburgh*
andersonmd@snyplava

ANALYTICAL AND VISUALIZATION TOOLS

10:00 - 12:00 Pacific Concourse N

Chaired by: Darrell L. Butler, Ball State University and John H. Flowers, University of Nebraska, Lincoln

10:00 Pacific Concourse N

Analysis and Visualization of Complex Psychophysiological Data: Coordinated Use of Application Software on a Microcomputer

Steven P. Reidbord & Dana J. Redington *University of California, San Francisco*
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Analysis of complex data sets provides challenges for microcomputer hardware and software. One solution is to spend substantial effort producing specialized software. Another solution is to use pre-existing software to as great an extent as possible. While no single software package is sufficient, coordinated use of a variety of commercial packages can facilitate the analysis and visualization of complex data. We discuss the approach and tools that we use in psychophysical research.

10:20 Pacific Concourse N

Don't be Fazed by PHASER!

James T. Townsend *Indiana University*

This presentation provides an overview of PHASER's ability to help the theorist model dynamic systems. Two examples, one canned and one novel, will be used to illustrate PHASER's power. The pros and cons of the program are discussed.

10:40 Pacific Concourse N

Stored Information as a Quantitative Measure of Sequential Structure

Mark E. Pevey, J. J. McDowell, & Robert Kessel *Emory University*
psyx9497@unix.cc.emory.edu

This paper describes a method to study the sequential structure of inter-event times. The technique is based upon the stored information of an iterative map (Shaw, 1984). We will illustrate the concept of stored information and show how it can be applied to the analysis of experimental data.

10:55 Pacific Concourse N

Representing Periodicities Using Rectangular Functions: Walsh Function Analysis

Hilary Broadbent & York A. Maksik
Brown University
hab@brownvm

Data often contain periodic components plus random variability. Walsh analysis reveals periodicities by fitting rec-tangular functions to data. It is analogous to Fourier analysis which uses sine functions. For some kinds of behavioral measures, for example those that produce strongly discontinuous data, Walsh analysis is superior to Fourier analysis. This presentation discusses the strengths and weaknesses of these two kinds of analyses and demonstrates the new Walsh technique.

11:10 Pacific Concourse N

Analyzing Response Paths Against Theoretical Paths

David A. Washburn *Georgia State University*
psydaw@gsuvm1

Response time and accuracy are sensitive to overall performance but may mask underlying response strategies. This presentation considers the analysis of response path data to complement conventional measures. Regression procedures are used to describe the relation between response path data and hypothetical responses. Data from computerized maze learning and other tasks are used to illustrate this procedure.

11:25 Pacific Concourse N

The Effectiveness of Dynamic Graphics in Revealing Structures in Multivariate Data

Frank M. Marchak *TASC*
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Previous research has shown no significant benefit of dynamic graphical presentation of scatterplots over static scatterplots, at least in determining the number of data clusters present in multidimensional data sets. The present study considers a number of other dependent variables. Subjects looked for a variety of different types of structure, such as linear trends and increases in variance. The results have implications for those using dynamic graphics in exploratory data analysis.

11:35 Pacific Concourse N

The Ear's Versus the Eye's Potential to Assess Characteristics of Data: Are We Too Visuocentric?

John H. Flowers & Terry A. Hauer
University of Nebraska
psyc004@unlvm

Powerful data visualization techniques have been developed both for exploratory data analysis and data communication. However, the potential for using auditory techniques has remained relatively unexplored. In our research, we compared visual and auditory presentations of central tendency, variability, and distribution shape. Our findings suggest that simple auditory analogs of traditional visual graphics may hold considerable promise.

11:50 Pacific Concourse N

Discussion

Darrell A. Butler *Ball State University*
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TOOLS FOR COURSEWARE DEVELOPMENT

10:00 - 11:00 Pacific Concourse M

Chaired by: Peter A. Hornby, State University of New York at Plattsburg

10:00 Pacific Concourse M

Introduction and Overview

Peter A. Hornby *SUNY-Plattsburgh*
hornbypa@snyplava

10:05 Pacific Concourse M

Using Course Builder to Develop Courseware

Claudia E. McDade *Jacksonville State University*
fcem@jsumus

A flexible course authoring system, Course Builder, provides a user-friendly symbolic programming language. It has been used to develop the Computer-Based Precision Learning System at Jacksonville State University. Both a tutoring and an evaluation system, CBPL reinforces high rates of correct responding across question formats. The session will demonstrate this unique use of Course Builder with student performance data from a personality theories course. It will also focus on collaborating with the software developers to customize Course Builder, as well.

10:20 Pacific Concourse M

Using Linkway for Courseware Development

Donald A. Cook & Michael A. Feldman *JHM Corporation*
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Software was developed to assess Likert-scale responses before and after interactive instructional tutorials. The package was developed using Linkway (an IBM Hypertext product) as the basis. Graphic enhancement of standard questions is supported, and text elaborations of scaled responses are prompted and saved for later discussion. A second Òpost-lessonÓrevisit of the same items -- to gauge intervening position shifts -- includes the first-time answers as part of the display. Cross-references to underlying databases are also available. Problems arising when integrating Linkway with other software are discussed. Sample data from eighth graders studying the Bill of Rights illustrates the versatility of the system.

10:35 Pacific Concourse M

Using Authorware Professional to Develop Courseware

Christopher R. Wolfe *Miami University, Oxford*
crwolfe@miavx1

This paper describes using Authorware Professional, an icon based, object-oriented authoring system, to develop courseware and on-line experiments. Notable features include direct editability, facility with many response types, and built-in variables. Shortcomings include a steep learning curve, inability to work in msecs, a linear development style, weak drawing tools, a lack of scroll bars for text, and some problems using Authorware with other applications. Overall the package is recommended for users with adequate resources.

10:50 Pacific Concourse M

Discussion

Peter A. Hornby *SUNY-Plattsburgh*
hornbypa@snyplava

TOOLS FOR COGNITIVE ANALYSIS

11:00 - 12:00 Pacific Concourse M

Chaired by: Cyndi McDaniel, Northern Kentucky University

11:00 Pacific Concourse M

A Semantic Analyzer of Schemata Organization (SASO)

Ernesto O. Lopez & John Theios
University of Wisconsin

A menu driven software system was developed to implement schemata organization in a constraint satisfaction neural network. The current neural net model presents several advantages and modifications over previous related-models. The schemata behavior shown by the present model is based on conceptual definitions and ratings obtained empirically from human subjects rather than on an idiosyncratic knowledge database of a single programmer.

11:15 Pacific Concourse M

A HyperCard-Based Tool for Studying Human Cognitive Processes in Complex Problem Solving

Steven R. Carter & David A. Walsh
University of Southern California
steveca@uscmvsa

This paper describes a computer-based system for research in decision making, based on the rubric of human problem solvers as builders and users of mental models. This paper consists of three sections: 1) a brief description of the behaviors which comprise the cornerstones of human problem solving in realistically complex domains; 2) a brief description of the substantive domain selected for use in studying these behaviors (financial problem solving), and the rationale behind its selection; and 3) a comprehensive description of the computerized decision making system which has been developed. The merits of using a computerized methodology via HyperCard is discussed in terms of the efficacy and type of data collection engendered. Appendices detailing specific scripts, subroutines, and XCFNs used in the testing set are included.

11:30 Pacific Concourse M

Computer-Assisted Language Analysis with the Macintosh

Amy Herstein Gervasio, John Taylor, & Stuart Hirshfield *Hamilton College*
x4q@cornellc

The Computer-Assisted Language Analysis System, or CALAS, designed in the early 1970's (Rush, Pepinsky, Meara, Landry, Strong, Valley, & Young, 1974) is a mainframe system for parsing transcripts of spoken text into grammatical components for categorizing verb types. It determines the grammatical category of each word on the basis of adjacent function words and placement of words in a sentence, rather than by using a large "dictionary." Although useful, the CALAS programs are extremely cumbersome to run. A new and streamlined Macintosh version of CALAS, written in "C," is described.

11:45 Pacific Concourse M

Computer Measurement of Cognitive Complexity and Selections of Competent Experts

Alexander G. Shmelyov *Moscow State University, USSR*
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Increased computer capacity has made it possible to perform, not a reduced, but a complete factor analysis of all individual matrices (objects-criteria) in a sample. The specific proportion of weights between the first, second and other factors (FPM) can be used as a measure of cognitive complexity-integrity. This measure attributes low scores to experts with too big or too small weight of a first factor. A PC Turbo-Pascal application package, EXPAN, provides an analysis of expert estimations and computes a collective multicriterial (multiconstructs) rating (scores) to support collective decision making. EXPAN provides the possibility to compute and to compare the FPM and the stereotypical similarity between the individual data matrix and average of the others. In various experiments the Spearman rank-correlation coefficient between FPM and SA was in the range of 0.5 to 0.65. The application potential has been developed in the field of managerial capacity and peer ratings.

INTERACTIVE DISCUSSIONS/POSTERS

12:00 - 12:40 Pacific Concourse K - N

Chaired by: Sarah Ransdell, New College

12:00 Concourse N2

GALATEA: A Flexible Personality/Behavior Simulator

Lynn Brock *EclecTec*
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Galatea is a computer-based simulation of "personality," which is construed to include all the non-cognitive elements that underlie behavior. While designed for the modelling of people or groups in psychological interventions, Galatea is applicable to simulating non-cognitive processes in any environment with a coherent theory of causes underlying the behavior of organisms. Galatea is implemented with a connect-the-blocks style interface, and includes a behavior "script" and plotted intensities of motives and behaviors as output.

12:00 Concourse N3

Speech Timing of Asymmetric and Interhemispheric Brain Functions

Ernest H. Friedman, Gary G. Sanders & Marcelline Burns *Case Western Reserve University & Southern California Research Institute*

The frequency and duration of speech hesitations correlated to coronary-risk and mood, respectively. Pauses are sorted into various fluency levels. Peak fluency of pauses 1+ second irrespective of pause-time, at maximal pause-time, and at intermediate fluency, are left-hemisphere, right-hemisphere and interhemispheric transit, respectively. Pauses less than 1 second at these fluency nodes monitor competence of asymmetric and interhemispheric brain functions which may be impaired by substance abuse, fatigue and the like.

12:00 Concourse K2

Tachistoscopic Presentation on a Personal Computer Using VGA Technology

Robert Haussmann *Drew University*
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A low-cost alternative to using a tachistoscope to present stimuli with millisecond accuracy can be found in today's personal computer. With the advent of modern video technology and faster microprocessors, a working tachistoscope program can be written, constrained only by the hardware limitations of the video monitor. Modifications to the system clock to time presentations and responses to millisecond precision are also discussed.

12:00 Concourse M2

Video Game Playing and Performance on Laboratory Information Processing Tasks

Earl Hunt *University of Washington*
& William Tirre *Air Force Human Resources Laboratory*
ehunt@milton.u.washington.edu

Computer controlled tasks are ubiquitous. Since they are used to study individual differences we must be concerned about transfer from extra-laboratory situations. It has been suggested that playing computer games develops skills that transfer to other situations. We report several large studies that indicate that such transfer does not occur. The contrast between our results and claims of positive transfer will be considered.

12:00 Concourse L2

The Theory and Measurement of Cheating

S. W. Link & R. B. Day *McMaster University*
link@mcmaster

Similarities between students' multiple choice test answers often suggest the occurrence of collusion or cheating. This paper describes a theory of cheating. We show the application of the theory to a classroom setting where every student is treated as either a target of an observer who is cheating, or as an observer who is cheating. The measure of cheating reveals the extent of cheating within the testing environment and suggests who is observing whom.

12:00 Concourse M1

A HyperCard Stack for the Creation of Graphically Organized Glossaries

Thomas A. Martin & Wallace J. Growney *Susquehanna University*
tmartin@einstein.susqu.edu

Many students have difficulty transforming expository text and lectures into well organized mental constructs. To address this problem, a HyperCard stack was developed which aids the creation of graphic representations of hierarchically structured sets of concepts, and links each concept to a definition. The general functions of the stack and its use in an abnormal psychology course will be discussed.

12:00 Concourse L1

GRADER: A Computer Program that Recommends Student Letter Grades

Michael E. Mills *Loyola Marymount University*

GRADER, a computer program that makes student test and/or course letter grade recommendations to instructors, is described. The program uses an algorithm to combine the content mastery (percentage correct) and peer comparison (ÒcurveÓ) approaches to setting grade cutoffs. In addition to standardizing the procedures with which letter grade cutoffs are made, GRADER may help to reduce instructor grading subjectivity and obviate tendencies toward grade inflation or deflation.

12:00 Concourse N1

An Automated Method of Psychiatric Treatment Planning

Chris E. Stout *Forest Hospital & Foundation*

Various methods have been employed to develop automated psychodiagnostic methods, and they have been successful. This presentation takes the next step into a method of automating the treatment planning of inpatient psychiatric patients.

12:00 Concourse K3

LabVIEW: An Introduction

Herb Treat *Trinity University*
htreat@trinity

LabVIEW is a graphical programming system for Macintosh-based data acquisition and control systems; the system is designed to control and gather data from plug-in boards and GPIB, RS-232, and VXI instruments. In taking advantage of the graphical capabilities of the Macintosh, LabVIEW programs look nothing like those of conventional text-based programming languages. Programs are written by ÒwiringÓ icons together; the result is that a LabVIEW program looks very much like a typical flow diagram.

SIMULATION OF PSYCHOLOGICAL DATA

12:40 - 2:00 Pacific Concourse N

Chaired by: John H. Flowers, University of Nebraska, Lincoln and Darrell Butler, Ball State University

12:40 Pacific Concourse N

An Evaluation of Scientific Visualization and Simulation Packages for the Macintosh

Frank M. Marchak & Dana D. Zulager
TASC
28707w@d1.dartmouth.edu

Many programs are available for Macintosh computers that provide advanced visualization tools. Some of the tools are stand-alone and some are part of mathematical packages. This paper reviews the capabilities, functionality, and ease of use of six of these tools: Mathematica, Spyglass Transform/View, Spyglass Dicer, JMP, MacSpin, and SYSTAT.

1:00 Pacific Concourse N

Pragmatics of Teaching Simulation Programs to be Chaotic

Frederick J. Bremner & Michael Yost
Trinity University
fbremner@trinity

This paper compares commercially available simulation programs that run on Macs and PCs (such as Brainmaker and MicroSaint). The comparison includes human factors issues such as ease of recovery, general information such as cost and computing power, and simulation performance such as the ability to simulate chaotic processes.

1:20 Pacific Concourse N

Using a Spreadsheet to Model Non-stationary, Multivariate Time Series

C. R. Gallistel *University of California, Los Angeles*
ibenahk@oac.ucla.edu

This presentation uses classical conditioning to illustrate time series analysis using a spreadsheet. The implementation requires matrix operations and access to common statistical distributions.

1:40 Pacific Concourse N

Discussion

Russell M. Church *Brown University*
rmchurch@brownvm

CUSTOM TOOLS FOR INFORMATION COLLECTION AND MANAGEMENT

12:40 - 2:00 Pacific Concourse M

Chaired by: Howard L. Kaplan, Addiction Research Foundation of Ontario

12:40 Pacific Concourse M

Introduction

Howard L. Kaplan *Addiction Research Foundation of Ontario*
howard.kaplan@canrem.uucp

The co-ordination of data from diverse instruments or experiments is required by many researchers, especially when they move from the controlled laboratory setting to clinical or applied ones. In this session, representatives of five research groups provide a set of perspectives on this issue. Brief presentations will be followed by a round table discussion of common concerns and general questions and comments.

12:45 Pacific Concourse M

Subject Pool Recordkeeping: A Database Application

Mark D. Cardillo & Darrell L. Butler
Ball State University
01mdcardillo@bsuvax1

We discuss the use of ORACLE, a relational database system, to manage subject pool data. Three main data tables contain student identification, experiment identification, and the links between specific subjects and experiments. Tools provided in ORACLE facilitate the efficient development of procedures to import and update data and to produce both regular reports and responses to ad hoc queries. Such flexibility is a major feature of fourth-generation, non-procedural database management systems.

12:57 Pacific Concourse M

Microcomputer Assessment System for Impaired Driver Treatment Programs: Results of a Pilot Study

Ron D. Hays, Jim Gillogly, Laural Hill, Matt Lewis, Robert Bell *RAND* & Ronald Nicholas *Center for Counseling*
hays%monty@rand.org

Computerized assessment of alcohol use is a promising alternative to traditional paper-and-pencil surveys. We are using the Microcomputer Assessment System (MAS), a program which allows the specification of on-line questionnaires in ASCII files, to gather intake data from clients at impaired driver treatment programs. Our research includes an evaluation of alternative questionnaire and response designs. We describe the results of a pilot study of 300 clients at a west coast treatment site.

1:09 Pacific Concourse M

Computerized Behavioral Data Collection and Analysis for Improved Clinical Outcomes in Rehabilitation

Charles T. Merbitz *Illinois Institute of Technology*

Medical rehabilitation fundamentally seeks patient behavior change. The Precision Rehabilitation System, a set of microcomputer-based tools similar to those used in psychological experimentation, monitors both therapist and patient behavior, providing a more objective alternative to subjective impressions of behavior change. The data so generated facilitates feedback that can ultimately lead to more efficient and cost-effective rehabilitation.

1:21 Pacific Concourse M

Representation of On-line Questionnaires in an Editable, Auditable Database

Howard L. Kaplan *Addiction Research Foundation of Ontario*
howard.kaplan@canrem.uucp

I present a reasonably general tool for specifying multiple-choice questionnaires for on-line presentation, using separate tables (similar to those in a relational database) to describe questions, responses, and summary scales. Two unique features support quality assurance: hardcopy versions of questionnaires are automatically produced in several different forms; audit trails of editing changes to both the questionnaire design and individual subjects' responses are automatically maintained.

1:33 Pacific Concourse M

MINDS: An Integrated Computerized Test Battery for Use in Neuropsychological and Health Psychological Assessment

Nico Brand *University of Utrecht*

MINDS (Mental Information processing and Neuropsychological Diagnostic System) was developed to co-ordinate previously independent computerized diagnostic instruments. A covering shell program integrates subject information with data resulting from individual test programs such as memory, attention and motor tasks and questionnaires developed using the author language shell program MicroCAT; new test programs can easily be added. An illustrative presentation of some research results from psychiatric and neurological patients will be included.

1:45 Pacific Concourse M

Round Table Discussion

Howard L. Kaplan *Addiction Research Foundation of Ontario*
howard.kaplan@canrem.uucp

INVITED SPEAKERS

Chaired by: Jonathan Vaughan, Hamilton College

2:20 - 3:20 Pacific Concourse N

David Rumelhart *Stanford University*

A Statistical Account of Learning and Generalization in Connectionists' Networks

3:25 - 4:25 Pacific Concourse N

Michael Posner *University of Oregon*

Neural Imaging of Cognitive Functions

PRESIDENTIAL ADDRESS

4:35 - 5:25 Pacific Concourse N

Jonathan Vaughan *Hamilton College*

The Dimensions of Computing

FACILITIES FOR IMPROMPTU SPECIAL INTEREST GROUP MEETINGS

5:45-6:30 6:30-7:15 7:15-8:00 Pacific Concourse K - N

ACADEMIC TUTORIALS

11:30 - 12:30 Pacific Concourse L

An Introduction to the Uses of Electronic Mail for Psychologists

Peter A. Hornby & Margaret D. Anderson *SUNY - Plattsburg*
hornbypa@snyplava

This tutorial is intended for individuals who have had little or no experience with electronic mail. It will consist of three, 20 minute sessions. Each session will include a five minute opportunity for questions.

11:30-11:50 Session 1: What is Electronic Mail? A brief description of the hardware and software required to use electronic communication systems. An introduction to the basic characteristics of electronic communication networks. A description of the BITNET system and other common networks, methods of accessing the e-mail networks, general procedures for using the networks, and specific e-mail facilities.

11:50-12:10 Session 2: What is Available Via Electronic Mail? This session will describe the types of services and information sources accessible via e-mail. Topics covered will include the BITNET Information Service, specific psychology-related bulletin boards, psychology list services, psychology newsletters and psychology discussion forums.

12:10-12:30 Session 3: How Can Psychologists Use Electronic Mail? Specific uses and applications of electronic mail will be described. These will include transfer of text and data files for research collaborations; conference organization, manuscript submission and review; access to remote computer facilities; and techniques and procedures for enhancement of instruction.

11:30 - 12:00 Pacific Concourse K

Generating Graphics For Presentation with Drawing Packages

Rick A. Bevins *University of Massachusetts*
rick.a.bevins@student.umass.edu

This tutorial will present examples of using high-end drawing packages on the Macintosh (Studio/32) and on the PC (CorelDRAW and *Arts & Letters*) to generate graphics for presentations. The primary focus will be on making 35 mm slides from color CRT displays.

12:40 - 1:25 Pacific Concourse K

Laboratory in Memory and Cognition

Sarah Ransdell *New College*
dsdaiam@cfrvm

This tutorial will describe the second edition of a software package for use in teaching cognitive psychology and research methods. Detailed are the distinctive features of the edition and how this courseware can be used effectively. Fifteen content programs were developed to provide multiple levels of use, ranging from simple demonstration to sophisticated templates for designing complex independent research projects. Relative to its predecessor, data handling is enhanced, the overall power of the programs to respond to a wider range of responses is increased, and the breadth of content has been expanded. The authors will allow hands-on use and answer questions about the software.

12:40 - 1:25 Pacific Concourse L

STATISTICA

Mark E. Pevey *Emory University*
psyx9497@unix.cc.emory.edu

STATISTICA is a high-performance integrated statistical data analysis, graphics and database management system for the PC. The interactive user interface features hierarchical menus and a statistical advisor, as well as a number of graphic templates.

1:25 - 2:10 Pacific Concourse L

Getting Started With HyperCard in Psychology

Cyndi McDaniel *Northern Kentucky University*
mcdaniel@nkuvax

HyperCard has been described as a software erector set. In that spirit, this tutorial will display a wide range of HyperCard stacks of interest to psychologists. Perhaps more important, techniques will be demonstrated for using the works of others as a foundation for projects that fit your needs. Participants will have the opportunity to obtain copies of free stacks and to experience some commercial stacks.

1:25 - 2:00 Pacific Concourse K

Computing in Applied Psychology in the Soviet Union

Vladimir I. Pokhilko & Alexander G. Shmelyov *Moscow State University, USSR*
shmel@cogsci.msu.su

Since 1985 thousands of personal computers have come into use in the USSR. The authors organized the division of computerized methods in the Soviet Psychological Society and a union-wide meeting. The submissions indicated strong interests in: 1) psychodiagnostic tools and databases, 2) multidimensional data analysis, 3) computerized tests, 4) psychophysiological measuring, 5) information and interpretation systems, 6) game testing and training, and 7) counseling and decision support. Following a review of the status of the Soviet ÒSCiP,Ówe would like to have an open forum exploring the potential for establishing Soviet-American working groups in areas of mutual interest over worldwide E-mail such as bitnet.

2:00 - 2:10 Pacific Concourse K

Computer Viruses - Combating the Disease While Computing Efficiently

Walter Schneider *University of Pittsburgh*
schneider@pittvms

A tutorial session that describes what computer viruses are, how they work and how to protect yourself against them. A computer virus is a program that replicates itself and spreads to computers with the goal of disrupting or destroying normal computer use. They are a serious problem in academic computing costing millions of dollars in losses and hindering free exchange of information. Simple, non-obtrusive low cost procedures can protect your system from nearly all virus problems. Specific software is described. Updates and examples of successful detection since the previous review of viruses (Schneider, 1989) are given.

9:30 - 10:15 pm Pacific Concourse M

Mathematica

S. D. Gronlund *University of Oklahoma*
scott@comedy.psy.uoknor.edu

Informal presentation on Mathematica software and its potential usefulness in psychology. The goal is to provide an opportunity to explore how your own research might benefit. One example of an implementation of global familiarity memory models will be illustrated (Gronlund, Sheu, & Ratcliff, 1989).

VENDOR DEMONSTRATIONS / TUTORIALS

Cedrus Corporation

11160 Veirs Mill Road, L-15 #221
Wheaton, MD 20902
800-CEDRUS1
Hisham Abboud
SuperLab

10:45 am Pacific Concourse L
8:45 pm Pacific Concourse L

Cedrus Corporation is introducing SuperLab, a new Psychology testing package for the Macintosh. SuperLab is interactive, easy-to-use software that lets you set up experiments quickly, using a point-and-click user interface. One millisecond accuracy is possible without the need for additional hardware. Any combination of auditory and visual stimuli can be presented, and ÒcodesÓ can be attached to trials to simplify postprocessing.

DSP Development Corp.

1 Kendall Square
Cambridge, MA 02139
617-577-1133
Susan Stewart
DADiSP

10:45 am Pacific Concourse K
8:00 pm Pacific Concourse N

DSP Development Corp. is proud to present DADiSP, the first graphical, general purpose productivity software for scientists an engineers. DADiSP allows users to manipulate and analyze large amounts of data in graphical or tabular format. With DADiSP, users can perform various complex operations and view results in multiple windows, up to 100 windows in each worksheet. DADiSP includes hundreds of data reduction, mathematical, statistical, Fourier transform, peak analysis, and graphical tools. Users also can define new functions and automate DADiSP sessions. The program includes an enhanced user interface, an extensive set of matrix math and statistical functions, powerful 3-D and 4-D plotting capabilities, and presentation-quality output. Data acquisition support is also available.

Hewlett Packard

19310 Pruneridge Avenue
Cupertino, CA 95104
415-694-2241
Russ McHugh
HP VEE-Test

9:15 am Pacific Concourse K
9:30 pm Pacific Concourse N

This module will discuss the newest software technology in controlling instruments, taking and analyzing data, and displaying results. HP VEE-Test is a software product that allows researchers to build complete graphical solutions without writing any software. During this presentation, we will discuss the concept of diagrammatic programming, and explain how HP VEE-Test lets you control instruments and analyze information, without needing to be an accomplished programmer. There will be time at the end for questions and answers.

Imagine That, Inc.

151 Bernal Road, Suite 5
San Jose, CA 95119
408-365-0305
Steve Lamperti
Extend

9:15 am Pacific Concourse L
8:00 pm Pacific Concourse K

Computer simulation is a powerful tool - it provides insight, stimulates creative thinking, and facilitates the presentation of ideas. Extend is a full-featured, integrated system for simulating behavior or performance:

- ¥ Explore ideas and try out concepts on the computer without the expense and hazards associated with laboratory or field work.
- ¥ Analyze the various processes involved in any system, and see how they interrelate.
- ¥ Graphically communicate topics in a way that textbooks and lectures can't.

Extend combines the ease-of-use of an iconic modeling system with the power of a built-in programming language, and supports full connectivity with other platforms and programs (spreadsheets, databases, etc.).

Jandel Scientific

65 Koch Road
Corte Madera, CA 94925
415-924-8640
Jimmy Walker
SigmaPlot
TableCurve

8:30 am Pacific Concourse K
8:00 pm Pacific Concourse L

Automated solutions for curve fitting and scientific data graphing are discussed and demonstrated. SigmaPlot (for Mac and PC) creates outstanding technical graphs. Extensive scientific features include huge datasets, automatic error bars, axis breaks, curve fitting, regression lines and confidence intervals. TableCurve offers an innovative solution to the task of equation discovery. TableCurve (for PCs) fits and ranks 3,320 linear and non-linear built-in equations to a given dataset in a single, highly automated and rapid processing step.

National Instruments

6504 Bridge Point Parkway
Austin, TX 78730-5039
800-IEEE-488
Liz Stice
LabVIEW

10:00 am Pacific Concourse L
8:45 pm Pacific Concourse N

In this session we will discuss personal computer-based data acquisition, analysis, and presentation for laboratory applications. We will begin with an overview of available hardware products intended to provide information on the features of plug-in data acquisition boards. For example, board sampling rate and resolution, as well as the availability of programmable gain, simultaneous sampling, and multiplexing will be covered. The presentation will conclude with a discussion of personal computer data acquisition products and the tradeoffs involved in choosing a software system that will fit your application requirements.

Psychology Software Tools, Inc.

511 Bevington Road
Pittsburgh, PA 15221
412-244-1908
Walter Schneider
MEL

10:00 am Pacific Concourse K
9:30 pm Pacific Concourse L

Demonstrations of the MEL Professional and the new MEL Student Laboratory will be presented. These provide precision experimentation software for research and instruction. MEL is the established standard in 1000 laboratory sites. The program collects data with millisecond accuracy and passes it to the data management system. Experiments are specified and analyzed by filling in self-explanatory forms. New features will be illustrated including: MAC version; infrared controller; and speech and sound support. The MEL Student Edition includes 28 simple-to-run experiments, textbook and automatic group analyses. Students can create experiments with the new Experiment Generator.

SAS Institute, Inc.

SAS Campus Drive
Cary, NC 27511-8000
919-677-8000
Ann Lehman
JMP

7:45 am Pacific Concourse L
8:00 pm Pacific Concourse M

JMP is SAS Institute's statistical graphics software for the Apple Macintosh. This presentation will include:
* an overview of JMP capabilities; data acquisition, data table management, classical statistical analyses, data exploration with dynamic plots and graphs, statistical quality control
* a summary of the unique JMP approach to statistics; each column of values to be analyzed has one of three basic measurement levels, and is assigned the role of either dependent or independent variables. These two variable specifications completely define the appropriate analysis.
* a survey of JMP statistical methods; descriptive statistics, linear and nonlinear modeling, categorical data analysis, nonparametric techniques, three dimensional plotting with principal components, exploring relationships of variables with correlations and multivariate plots.
* an example of exploring and analyzing data with JMP.

SYSTAT, Inc.

1800 Sherman Avenue
Evanston, IL 60201-3793
708-864-5670
Tiffany Holmes
SYSTAT

8:30 am Pacific Concourse L
8:45 pm Pacific Concourse K

SYSTAT, Inc. provides statistical and graphical software for mini and microcomputers. SYSTAT 5.0 for the PC includes a menu interface, the general linear model and comprehensive documentation. SYSTAT 5.1 for the Mac uses the Mac interface for exploratory data analysis, and comprehensive statistical and presentation-quality graphical routines. Both the Mac and the PC (DOS) products are available in network versions, as well.

The Math Works

Cochituate Place
24 Prime Park Way
Natick, MA 01760
508-653-1415
Joanne Dawson
MATLAB
SIMULAB

7:45 am Pacific Concourse K
8:45 pm Pacific Concourse M

MATLAB is a high-performance interactive software program for scientific and engineering numeric computation and data analysis. It combines numerical analysis, matrix computation, and 2-D and 3-D graphics in an easy-to-use environment in which problems and solutions are expressed just as they are written mathematically, without the need for additional programming. Capabilities include: matrix computation, equation solving, polynomial operations, complex arithmetic, statistical functions and other numerical techniques. Optional Toolboxes add functionality for digital signal processing, control system design, parametric modelling, spline analysis, nonlinear optimization, and other applications.

BUSINESS MEETING

Presided by: Darrell Butler, Ball State University

9:30 - 10:00 pm — Pacific Concourse K

COMBINED PC/MACINTOSH USERS GROUPS

Moderated by: Richard Lehman, Franklin & Marshall College

10:00 pm — Pacific Concourse K

AWARDS

The **SCiP/Erlbaum Distinguished Paper Award** will be given to each of the two best papers presented at the SCiP meeting this year. It is a way for the Society to formally recognize exemplary work. It consists of a certificate accompanied by ten Lawrence Erlbaum books. The books are part of the display in Pacific Concourse O and have been graciously provided by Erlbaum in support of academic excellence. The award will consider both the content and the presentation itself. The selection will be based on the audience feedback in conjunction with the judgement of the Program Committee.

The **Outstanding Student Paper Award** will be given to the best student paper. It consists of a certificate accompanied by a $300 cash prize, a complimentary one-year membership in the Society, a complimentary one-year subscription to *Behavior Research Methods, Instruments, & Computers,* and a copy of SuperLab which was donated by Cedrus Corp. The selection will be made by the Program Committee.

Two awards will be given by the Program Chair. These **Program Chair's Awards** are a way to formally recognize exemplary contributions to the success of SCiP by reviewers and the active session chairs.

Three drawings will also be held. Two will be randomly drawn from the completed **Presentation Feedback** forms, one will be drawn from the completed **Conference Feedback** forms. Each winner will receive an Erlbaum book.