SCiP 2002 Program

32nd Annual Meeting of the Society for Computers in Psychology

Hyatt Regency Crown Center

Kansas City, Missouri

November 21, 2002

TIME	EMPIRE A	EMPIRE B	CHOUTEAU ROOM
8:00-9:25am	**Web-Based Instruction** *Chair:* John G. Jewell *Participants:* Garbin et al.; Meunier et al.; Allbritton; Jewell; Reips et al.	**Statistics and Modeling** *Chair:* Chris Westbury *Participants*: Sheu; Westbury et al.; Garbin et al; Kurby et al.; Noelle et al.	**Posters** *Participants:* Kinney; Wender; Wagener; Cantalupo et al.; Evans et al.
9:35-10:50am	**Web-Based Research and Computer-Mediated Communication** *Chair:* Kevin O'Neil *Participants:* O'Neil; Schulte-Mecklenbeck; Mullennix et al.; Chech et al.	**Human-Computer Interaction and Virtual Environments** *Chair:* Greg Francis *Participants:* Edmonds; Francis; Liu et al.; Waller et al.; Stammberger	**Posters and Vendor Displays**
11:00-12:00pm (Empire A)	**Invited Address: Robert Glushko** *The Document Strikes Back*		
12:00-1:00pm	LUNCH (SCiP Tables at Terrace Restaurant)		
1:00-2:10pm	**Research Tools (1)** *Chair:* T.E. LeVere *Participants*: De Clercq et al.; Crutcher; Daniel et al.; Arnott et al.	**Diagnostic and Assessment Tools** *Chair:* Nicole English *Participants:* Stilling et al.; English et al.; De Young et al.; Schunn et al.	**Posters and Vendor Displays**
2:20-3:20pm (Empire A)	**Invited Address: William Uttal** *Cognitive Imaging: A New Phrenology?*		
3:30-4:40pm	**Research Tools (2)** *Chair:* Kathleen Rastle Participants: Rastle et al.; Davidson, DeVore	**Methodological Techniques** *Chair*: Frederick Bonato Participants: Plant et al.; Bonato et al.; Crow et al.; LeVere et al.	**Posters and Vendor Displays**
4:45-5:45pm (Empire A)	**Presidential Address: David Washburn** *The Games Psychologists Play (and the Data They Provide)*		
5:45-6:15pm	Business Meeting		
6:30-8:30pm (Empire B)	**Workshop: Introduction to MediaLab and DirectRT** Blair Jarvis, Empirisoft Corporation		

SCiP 2002

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Program Committee

Michael Birnbaum, Chris Cozby, Paula Goolkasian, John Krantz, Cyndi McDaniel, Ken McGraw, Sarah Ransdell, Larry Rosenblum, John Vokey, David Washburn, and Chris Wolfe

Welcome from the President

This year, the Society for Computer in Psychology returns to the state of Missouri, where the organization held its first annual meeting in 1971. Then, we were the "Society for the Use of On-Line Computers in Psychology." The psychologists who assembled in St. Louis that year recognized a need to exchange information about research and educational applications of computer technology. As I look at the program for our 32nd annual meeting, I see that those original goals are still valued and that the focus of the Society is more clearly "on-line" than ever before!

I want to thank Program Chair Robert Proctor for preparing an excellent program. We are all also indebted to Chris Wolfe for conducting the business of SCiP as its Secretary-Treasurer. Finally, I want to acknowledge the valuable efforts of Robert Allan and Curt Burgess for their work on the organization's web pages.

Let me encourage each of you to enjoy the program and the annual meeting, and to contribute to the future of SCiP by encouraging your colleagues and students to join, to attend, and to participate.

David Washburn, President

Greetings from the Program Chair

This year's program includes talks covering a broad range of topics pertaining to computers and psychology. I thank the participants for preparing many interesting presentations and the members of the program committee for reviewing the submissions. I would also like to thank Chris Wolfe, Roman Taraban, and Kim Vu for helping to organize the program. I think that the presentations represent the cutting edge of computer usage in psychology and hope that you find them to be stimulating and informative.

We are honored to have Robert Glushko and William Uttal as our invited speakers this year. We also appreciate the support given to our conference by the vendors. I hope that you will enjoy SCiP 2002 and your visit to Kansas City.

Robert Proctor, Program Chair

Let's Meet for Lunch!

SCiP Tables for Lunch at the Terrace Restaurant

To help us get to know one another we have reserved a set of SCiP tables at the Terrace Restaurant (open air bistro) at the Hyatt at 12:00. Come meet others working at the intersection of computers and psychology in a relaxed, informal environment. Lunch is on you (it is not included in the cost of conference registration). It's a great way to meet the people doing some of the most interesting work in the field!

Session 1: 8:00-9:25 am Empire A

Web-Based Instruction

CHAIR: John G. Jewell

8:00 **Some Attributes of Web-Based Exercises that Promote Student Learning**
Calvin P. Garbin, University of Nebraska – Lincoln,
Audrey Jones, Talent+
Sara A. Moore, University of Nebraska - Lincoln
Heather Wood, Omni Behavioral Services
cgarbin@unl.edu

We summarize and integrate results from our programmatic research investigating how to construct web-based exercises to improve student understanding and performance. The three attributes we will discuss include exercise type (fixed-item vs. proficiency exercises), item/response type (multiple choice vs. multiple selection vs. fill-in-the-blank), and item-specific feedback (correct answer identification vs. correct answer explanation).

8:20 **Virtual FIGS**
Vagedevi Meunier, University of Texas at Austin
Cassandre Giguere Alvarado, University of Texas at Austin
vagdevi@mail.utexas.edu

A web-based course was offered as an adjunct to an ongoing Freshman Interest Group (FIG) at the University of Texas at Austin. A FIG is an optional seminar for cohorts of students enrolled in the same classes that meets once a week for emotional and academic support, assistance in adjusting to the university, and to help develop a multi-faceted learning community. Research to date has shown that FIGs contribute to higher retention and GPA. This presentation will outline some of the preliminary findings from the "Virtual" FIG, looking at enrollment, demographics of the cohort, curriculum design, and similarities and differences in building an online learning community of students.

8:40 **Using Open-Source Solutions to Teach Computing Skills to Psychology Students**
David Allbritton, DePaul University
dallbrit@depaul.edu

A course that relies on open-source software for teaching introductory computer programming and web development to psychology graduate and advanced undergraduate students is described. The rationale, content, learning goals and outcomes of the course are described., along with the specific software used. The advantages of relying on open-source solutions rather than commercial software for implementing such a course are discussed.

8:55 **How to Bring Robotics to the Classroom**
John G. Jewell, Ursinus College
jjewell@ursinus.edu

A great way to introduce the idea of the complexity of human behavior and human sensory systems is through robotics. If you could build a robot, what would you make your robot do? Now, how would you produce this creature? The design and construction of simple robot creatures using the Lego Mindstorms "Robotic Invention System" as a teaching aid for introductory neuroscience courses will be discussed.

9:10 **Web-Supported Teaching of Experimental Design and Internet-Based Experimentation in the Swiss Virtual Campus**
Ulf-Dietrich Reips, University of Zurich
Friedrich Wilkening, University of Zurich
ureips@genpsy.unizh.ch

An Internet-based course on "Experimental Design and Web-based Experimentation" is presented that is part of the Swiss Virtual Campus project "Methodological Education for the Social Sciences" (Mesosworld). The talk describes the technological basis, organization, content modular structure and networking as well as the didactical philosophy of this course.

Session 2: 8:00-9:25 am Empire B

Statistics and Modeling

CHAIR: Chris Westbury

8:00 **Covariance Structures for Doubly Repeated Measures Data**
Ching-Fan Sheu, DePaul University
csheu@depaul.edu

This paper considers several covariance structures for analyzing multivariate repeated measures data from a study of social and cognitive development of children. Although the research interest is to determine the effects of covariates on the outcome observation, the covariance structure of within-subject measures needs to be examined to ensure that the covariate effects are properly estimated. The SAS MIXED procedure is used to perform the analysis.

8:20 **Characterizing Non-Linear Variable Interactions Using Genetic Programming**
Chris Westbury, University of Alberta
Lori Buchanan, University of Windsor
Michael Sanderson, University of Alberta
Mijke Rhemtulla, University of Alberta
Leah Phillips, University of Alberta
chrisw@ualberta.ca

Many problems in psychological research involve multiple interacting variables. The analyses usually used to uncover such relationships have many limitations. We describe our work in using genetic programming to evolve equations to combine variables in non-linear ways in a number of different domains. We will focus on three different examples of studies of interaction effects from experimental and psychometric problems. In all cases genetic programming was able to correctly describe a non-linear combination of item whose utility was independently verified. We will discuss the general implications of genetic programming for problems that involve non-linear variable interactions.

8:40 **Statistical Assignments and Examinations Online: Software and Learning Outcomes**
Calvin P. Garbin, University of Nebraska - Lincoln
David DeWester, University of Nebraska - Lincoln
cgarbin@unl.edu

Instructors can simulate individualized data sets for several statistical models and combinations. Students access data and provide answers on-line, receiving immediate feedback and correcting errors. Comparisons of on-line and on-paper assignments (N = 244) revealed students strongly prefer on-line versions. Homework and exam performance is equivalent for on-line and on-paper assignments, but the grading time for on-line assignments is approximately 15% that for on-paper assignments.

8:55 **Latent Semantic Analysis Mimics Human Judgments on Reading Strategy of Scientific Texts**
Christopher A. Kurby, Northern Illinois University DeKalb
K. Wiemer-Hastings, Northern Illinois University DeKalb
N. Ganduri, Northern Illinois University DeKalb
Discourse Technology Group at Northern Illinois University DeKalb
D. McNamara, Old Dominion University
chkurby@yahoo.com

We evaluated a Latent Semantic Analysis (LSA) on science texts, developed for a SERT trainer for effective reading of science text. Cosines from the LSA space correlated significantly with expert similarity ratings between student thoughts and benchmarks representing different kinds of reading styles. It outperformed the extensive but nonspecific General Reading LSA space. We propose that this domain specific LSA space will be useful for identifying reading strategies from students' thoughts about the text.

9:10 **Using a Virtual Environment to Assess the Ecological Validity of a Model of Prefrontal Cortex**
David Noelle, Vanderbilt University
Tamer Fakhouri, Vanderbilt University
david.noelle@vanderbilt.edu

A computational model of prefrontal cortex is presented. This model has been previously assessed in the context of a number of laboratory tasks, but concerns over the ability of this model to scale to ecologically valid situations remain. Initial efforts to address these concerns are described, involving the embedding of the model in a simulated virtual environment, allowing the model to be assessed under conditions of rich sensory experience and complex reward contingencies.

Session 3: 9:35-10:50 am Empire A

Web-Based Research and Computer-Mediated Communication

CHAIR: Kevin M. O'Neil

9:35 **Web-Based Research: Effects of Methodological Variables on Dropout, Sample Characteristics, and Results**
Kevin M. O'Neil, John Jay College of Criminal Justice
koneil@jjay.cuny.edu

Previous research has suggested the importance of methodological variables in Web-based research. This paper presents two studies that manipulated sample type, financial incentives, when personal information is asked for, and method of obtaining informed consent and analyzed effects on dropout, sample characteristics, and substantive results. Each methodological variable had an effect on dropout. Some methodological variables influenced attitudinal data and also affected results through both main effects and interactions.

9:55 **With or Without You: Decision Making in the Lab and on the Internet**
Michael Schulte-Mecklenbeck, University of Fribourg
michael.schulte@unifr.ch

Focus was set on the difference between two locations of research (laboratory, internet) and two modes of searching for information (search, click). The laboratory version resulted in a more extensive search for information than the internet version. Differences between search and click mode are discussed. Results of this experiment question the common assumption of achieving the same results in laboratory and internet based research.

10:10 **Trust and the Use of Computer Synthesized Speech**
John W. Mullennix, University of Pittsburgh at Johnstown
Steven E. Stern, University of Pittsburgh at Johnstown
Erin L. Brumbaugh, University of Pittsburgh at Johnstown
Steven J. Martin, University of Pittsburgh at Johnstown
Lucas C. Moore, University of Pittsburgh at Johnstown
M. Lynn Winters University of Pittsburgh at Johnstown
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Perceptions of trustworthiness of human versus synthetic computerized speech were examined. Overall, synthetic speech was viewed as less trustworthy than human speech. However, these perceptions were affected by the purpose of the spoken passage and whether the user was perceived as speech disabled. The results suggest that the degree to which people trust synthetic speech is mediated by factors related to the user and the context surrounding the use of the system.

10:30 **Influencing Frequency and Size of Exchanges in Synchronous Dyadic Computer-Mediated Communication**
Claude Cech, University of Louisiana-Lafayette
Sherri L. Condon, University of Louisiana-Lafayette
cech@louisiana.edu

We previously found that composition screen size in computer-mediated communication affects message size. Does this result arise from memory constraints inherent in creating a long message of several packets, only the latest of which is still viewable? Experiment 1 allows messages larger than the composition area, and manipulates window size and scroll-back. Experiment 2 examines the effects of separating channels for incoming and outgoing messages. We find that larger windows and scrollability promote greater information exchange in a single-channel interface. More frequent but smaller exchanges occur with multiple channels. We argue that the latter result reflects enhanced turn negotiation.

Session 4: 9:35-10:50 am Empire B

Human-Computer Interaction and Virtual Environments

CHAIR: Greg Francis

9:35 **Uzilla: A New Tool for Web Usability Testing**
Andy Edmonds, Clemson University
andyed@surfmind.com

Web usability testing presents interesting challenges for accurate data collection. An instrumented browser solution called Uzilla is compared to existing solutions. A client-server architecture combined with the open source Mozilla browser offers a more robust and complete solution than previously available for accurate reporting, streamlining, and encouraging best practices in usability testing.

9:50 **MFDTool**

Greg Francis, Purdue University
gfrancis@psych.purdue.edu

This talk describes a software program called MFDTool, which allows HCI engineers to optimize multifunction displays (MFDs). Current approaches to the design of these types of systems emphasize adherence to guidelines. Unfortunately, the complexity of some MFD systems make it difficult to insure that the guidelines are actually satisfied. MFDTool provides a quantitative approach to satisfying the guidelines that the designer considers to be the most important for a given MFD.

10:05 **Applying Models of Visual Search**

Baili Liu, University of Washington Bothell
Greg Francis, Purdue University
gfrancis@psych.purdue.edu

The Guided Search (GS) model, a quantitative model of visual search, was applied to the task of menu design development. In Experiment 1, a model-generated design was created that assigned colors to menu labels under the restriction that the locations of the menu labels be the same as the human's design. This model-generated design was then experimentally compared to the human-generated design. These results suggest that with cognitive constraints controlled, the GS model can generate designs that are nearly as good as those created by human designs.

10:20 **Virtual Environments as a Tool for Assessing Environmental Knowledge**

David Waller, Miami University
Andrew C. Beall, University of California, Santa Barbara
Jack M. Loomis, University of California, Santa Barbara
wallerda@muohio.edu

Computer-simulated (virtual) environments offer several potential advantages over traditional means (e.g., paper and pencil tests) of assessing people’s knowledge of large-scale environments. We examined the relative accuracy and precision with which people estimated directions between landmarks in a large familiar environment using five different assessment methods that varied in their visual realism and interactivity. Results clearly show computer-administered assessments to be more accurate, precise, and ecologically valid.

10:35 **Embodiment in Graphical Virtual Worlds: An Experimental Platform for the Study of Distributed Problem Solving**

Iris Stammberger, Tufts University
istammberger@mindspring.com

This article presents a multi-user graphical virtual world technology where small communities of subjects work, through their virtual personae or avatars, in the solution of a problem. The technology allows for the different cognitive systems – the technological, the social and the individual – to be observed while new representations are being generated through a process of distributed reasoning. This experimental platform allows for the consideration of population level phenomena as they impact and implement the embodied, embedded, extended and situated mind. Since the technology is still in its prototype phase, only preliminary results are discussed.

Invited Address: Robert Glushko
The Document Strikes Back
11:00-12:00 pm (Empire A)

Two thousand years of technology evolution from pottery to paper to computers made documents easier to produce and store but did not alter their fundamental character as static artifacts of implicit activity encoded in an application-specific fashion. But the idea of what documents are and what can be done with them is profoundly changing. The key insight, pioneered by SGML in the late 1980s and mainstreamed by XML in the last few years, is that of rigorously specifying the logical and semantic structure of information so it can be separated from its presentation. With explicit markup, a document becomes an information source rather than an artifact, because a multitude of different artifacts can be generated from the same source. Furthermore, just as documents can now have a formal specification of their components and the rules by which they combine, so can the processes or rules that govern their behavior. This fundamental transformation of the idea of a document finally makes possible the long sought-after "paperless office" and is the foundation for the "virtual enterprise," "web services," and other innovative business models of the Internet and non-Internet economy. http://www.sims.berkeley.edu/~glushko/

12:00pm-1:00 pm: SCiP Tables for Lunch at the Terrace Restaurant

Session 5: 1:00-2:10 pm — Empire A

Research Tools- 1

CHAIR: T.E. LeVere

1:00 **STIVID : A VBscript Based Program for Adding Visual and Auditory Stimuli on Video Tapes**

Armand De Clercq, Ghent University
A. Buysse, Ghent University
H. Roeyers, Ghent University
L. Verhofstadt, Ghent University
I. Antrop, Ghent University
K. De Corte, Ghent University
Armand.declercq@rug.ac.be

Some psychological experiments require placement of visual and auditory stimuli on predefined frames in a video. A possibility not available with standard video editing software. Stivid can add images, simple shapes and audio tones in existing video files at precise frames. Three applications are discussed: adding stimuli for reaction time experiments with couples watching a relational conflict, use of distractors in ADHD experiments, and placing eye masks on existing videos to manipulate the perceiver's perceptibility of the target's facial expression during the mind-reading process.

1:15 **Improving the Encoding of Verbal Reports Using A Computer-Aided Digital Audio Recording and Encoding System**

Robert J. Crutcher, University of Dayton
crutcher@udayton.edu

The increased use of verbal reports in psychological research necessitates tools to improve the ease and reliability of collecting and coding verbal report data. A new approach is described that maintains the verbal report data in digitally recorded audio form throughout the collecting and encoding processes. A new computer-aided encoding tool, CAPAS, is described that plays individual protocol segments in random order and stores computer keyboard-entered codes in an SPSS-formatted data file.

1:35 **QUAID: Critiquing Questions on the World Wide Web**

Frances Daniel, University of Memphis
Arthur Graesser, University of Memphis
Shannon Whitten, University of Memphis
James Wallace, University of Memphis
fdaniel@memphis.edu

The computer tool, QUAID (Question Understanding Aid), is a guide for survey methodologists and others to help them revise questions. Three experts scored 550 questions and marked them as either problematic or non-problematic. Signal detection analyses have shown that QUAID does a reliable job of critiquing questions as compared to the human raters. QUAID is accessible on the Internet and has many possible future uses.

1:55 **A Web-Based Tool for Gathering Ordinal Rankings**

Elizabeth Arnott, DePaul University
David Allbritton, DePaul University
earnott@depaul.edu

The gathering of ordinal ranking data is an integral part of many areas of psychological research. We have developed a web interface which makes ordinal data collection easier. Perl scripts are used to create web pages displaying groups of items for ranking by participants. The ratings are then stored in either a database or a text file (as comma-separated values). Applications and potential improvements are discussed.

Session 6: 1:00-2:10 pm Empire B

Diagnostic and Assessment Tools

CHAIR: Nicole English

1:00 **Exploration of Computer Use as a Diagnostic Tool in the Field of Psychology**
Tom Stilling, Lewis University
Ray Klump, Lewis University
STILTH@AOL.COM

This study serves two functions: it chronicles the development, desirability and use of computerized diagnostic tools in the field of psychology and after establishing the merit of the approach; it provides a practical example of how to incorporate this technology into everyday practice. Some of the crucial benefits of computerized diagnostic tools are that they could increase the accuracy of diagnosis, decrease costs and decrease the feeling of separation that patients feel about their treatment.

1:20 **A Web-Based Assessment System for Clinical Practice and Research**
Nicole English, University of Missouri-Kansas City
Rod Van Whitlock, University of Missouri-Kansas City
Bernard Lubin, University of Missouri-Kansas City
Mike Strong, University of Missouri-Kansas City
englishn@umkc.edu

This purpose of this study is to present findings on the clinical utility of the Web-based Assessment System (A-SYST), designed to be used in facilitating screening, treatment planning, progress monitoring and outcome assessment in clinical settings. Scientific aspects such as reliability, validity, sensitivity to change, and comparison of Web-based and paper-and-pencil versions will presented along with data on clinical appropriateness such as extent of client burden, readability, and ease of administration, scoring and interpretation.

1:40 **Dynamic Personalization Using the Technology Profile Inventory: Development of an Instrument for Profiling Information Technology Users**
Colin G. DeYoung, University of Toronto
Ian Spence, University of Toronto
colin@psych.utoronto.ca

The Technology Profile Inventory (TPI) is a new self-report questionnaire for assessing attitudes toward computers and the Internet. We discuss the construction and validation of the TPI and its relation to demographic variables and information technology use and experience in a university sample (N = 318). One application of the TPI is typing individuals for research on the creation of dynamic personalization software that could increase the usability of web sites and other computer interfaces.

1:55 **A Web-Based System for Reciprocal Evaluation of Student Paper Writing**
Christian Schunn, LRDC, University of Pittsburgh
Kwangsu Cho, LRDC, University of Pittsburgh
schunn@pitt.edu

We present a web-based system for scaffolding undergraduate and graduate writing through reciprocal evaluation. Through the system, students can improve their writing skills and their critiquing skills by receiving feedback on both. The system is being developed and evaluated in several psychology courses. The fully automated nature of the system will allow it to be used effectively even with classes of many hundreds of students.

Invited Address: William Uttal
Cognitive Imaging: A New Phrenology?
2:20-3:20 pm (Empire A)

There has been explosive recent growth in research utilizing new imaging technology on how the mind and the brain are related. However, this research is based upon a number of fundamental, but unanswered, questions. Some suggest that the attempt to localize cognitive functions in the brain may be an unfulfillable quest. My talk explores implicit, but generally overlooked, conceptual, logical, and technical issues pertaining to current ideas about cognitive and brain modularity.

Session 7: 3:30-4:30 pm Empire A
Research Tools- 2
CHAIR: Kathleen Rastle

3:30 **358,534 Nonwords: The ARC Nonword Database**
Kathleen Rastle, Macquarie University, Royal Holloway University of London
Jonathan Harrington, Macquarie University, Institute of Phonetics and Digital Speech Processing
Max Coltheart, Macquarie University
Kathy.Rastle@rhul.ac.uk

We present a web-based psycholinguistic resource, the ARC Nonword Database, which contains 358,534 nonwords – 48,534 pseudohomophones and 310,000 non-pseudohomophonic nonwords. Nonwords in the Database are derived from an original model of the phonotactic and orthographic constraints of Australian and Standard Southern British English monosyllables, which will be described. Items can be selected from the Database on the basis of a wide variety of properties known or suspected to be of theoretical importance for the investigation of reading.

3:45 **Just-In-Time Word Frequency Estimates**
Douglas J. Davidson, Urbana-Champaign
ddavidson@ling.ohio-state.edu

Word frequency is an important measure in many psycholinguistic experiments, but is often based on corpora collected years before experiments are actually conducted. A variety of simple Unix command-line text-processing tools are available for automating text retrieval from the web. These tools can be used to create word frequency estimates that are local to the speech community under investigation, and recent with respect to the time of study.

4:00 **Lessons for Using E-Prime in an Instructional Setting**
Cynthia James DeVore, University of Minnesota
devo0023@tc.umn.edu

E-Prime has changed how we conduct research and is changing the classroom as well. In this tutorial, three situations are addressed that have applications for classroom and research. The first addresses how to automate the start-up procedure to create unique subject numbers for simultaneous participants. The second shows how Packages can automate data collection. The third describes how to interpret Canvas space to present statistical concepts like correlations, regression lines, and normal curves.

Session 8: 3:30-4:30 pm Empire B

Methodological Techniques

CHAIR: Frederick Bonato

3:30 **How Choice of Mouse May Effect Response Timing in Psychological Studies**
Richard R. Plant, University of York
N. Hammond, University of York
T. Whitehouse, University of York
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Anecdotal evidence from the community suggests that many researchers believe that a stationary mouse, with the ball removed, is the next best alternative to a more expensive response box. Mice from the early 1990's did seem offer a cheap and viable alternative with fairly consistent results found between studies. However has anything changed in the intervening decade? Are newer mice better than the old? In this paper we highlight the key issues.

3:45 **Methodological Improvements for Measuring Vection (Illusory Self-Motion)**
Frederick Bonato, Saint Peter's College
Andrea Bubka, Saint Peter's College
bonato_f@spc.edu

Studying vection (illusory self-motion) using an optokinetic drum can help isolate visual variables that affect ego-motion. Under optokinetic drum conditions a stationary observer views the interior of a large rotating drum. Within 20-30 seconds vection is usually experienced in the opposite direction. Changing stimuli (drum linings) and measuring vection have often been problematic. We present an effective method for changing stimuli and a computer interface method for continuously and precisely measuring vection onset and magnitude.

4:00 **Investigating Choice Spaces**
Janis J. Crow, Kansas State University
James Shanteau, Kansas State University
jcrow@ksu.edu

Often investigations of consumer choice processes include a matrix of alternatives by attributes. The researcher created matrix provides a product space for the participant. This paper investigates the choice processes when a participant creates their own product space. It proposes an alternative and methodological approach to consumer choice processes. Empirical results indicate consumers can make choices when creating their own product space. These results provide a new avenue in exploring choice processes.

4:15 **The MTM Test as a Metric of Human Short-Term Memory: Its Reliability, Construct Validity, and Predictive Capacity**
T.E. LeVere, North Carolina State University
Katherine Klein, North Carolina State University
tel@unity.ncsu.edu

The present research evaluated the Memory Test Matrix (MTM) as a metric of human short-term memory. The task is a Java applet based upon the delay response protocols used with animals and thus does not depend upon unique complex human abilities; is gender and culturally neutral; can be used with any aged subject; and, because it is computer based, is capable of remote automated self-administration over computer networks such as the World Wide Web. The results of three experiments indicate that while the MTM task is derived from animal research, it nonetheless has good general psychometric properties with respect to human memory. An individual’s MTM performance predicted student end-of-semester grade point totals in a college research methods course.

Presidential Address: David Washburn
The Games Psychologists Play
(and the Data They Provide)
4:45-5:45 pm (Empire A)

Computer games constitute a multi-billion dollar entertainment industry, but they are also useful as tools for research and instruction. In recent years, the line has been increasingly blurred between computer games on the one hand and computerized research tasks on the other. Computer-game hardware and software provide the means for manipulating motivation, for improving psychological well-being, and for presenting complex stimuli under demanding conditions. The promises and pitfalls of using computer games for research and instruction will be illustrated with a series of comparative, human factors, and cognitive studies.

Business Meeting 5:45-6:15 pm *Empire A*

Workshop: Introduction to MediaLab and DirectRT
Blair Jarvis, Empirisoft Corporation
6:30-8:30 pm (Empire B)

This workshop will introduce SCiP attendees to the new MediaLab and DirectRT research software packages. MediaLab will be covered in the first hour and DirectRT in the second. Although the programs are independent, the packages can be used together as a complete resource for conducting all types of psychology experiments. The workshop will focus on ease-of-use features, experimental design flexibility, and multi-media capability, including the integration of images, sound, video, html, PowerPoint shows and more. An overview of both programs can be explored in advance at www.empirisoft.com. See advertisement in this program for more detail.

Poster Session 9:00-4:00 pm

(Authors Present 9-10 am)

1 **Testing in Online Courses: Research and Practical Issues**

Norman E. Kinney, Southeast Missouri State University
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A study was conducted to examine whether online testing resulted in differential performance or learning in online versus on-campus versions of an introductory psychology course. The results are discussed in the context of a critical review of the literature on the measurement of online teaching effectiveness, the key requirements of the online testing software used (in this case OIS, Online Instructor Suite), and the need for appropriate measures of learning and differential format success.

2 **Animated Diagrams in Teaching Statistics**

Karl F. Wender, University of Trier
J.-Sebastian Muehlboeck, University of Trier
wender@cogpsy.uni-trier.de

The paper investigates as to whether computer animated graphics have a beneficial effect above static versions in teaching statistics. Four concepts were presented to students in class, either in static or in animated form: multiplication of two matrices, the covariance of two random variables, the method of least squares in linear regression, and strength of effect. Results showed a significant advantage of the animated presentation.

3 **Evaluation of an Adaptive Internet Course for Teaching Psychology to Students of Education**

Monika Wagener, University of Trier
wender@cogpsy.uni-trier.de

An adaptive Internet tutor is introduced and the main features will be discussed. The tutor is used for teaching Psychology not only to Psychology students but to students of Education also. The tutor is based on an episodic learner model, so that students can get an individual feedback and questions are based on the individual learning history. A course about the methods of scientific Psychology was evaluated. The results of a test showed advantages of tutor users compared to students, who were provided with the same information on paper.

4 **Computer-Driven Transcranial Magnetic Stimulation (TMS) in Motor and Cognitive Tasks with a Non-human Primate (Macaca mulatta)**

Claudio Cantalupo, Georgia State University; Emory University
John B. Gulledge, Georgia State University
David A. Washburn, Georgia State University
William D. Hopkins, Emory University; Berry College
ccantal@rmy.emory.edu

Recently, Transcranial Magnetic Stimulation (TMS) has become increasingly popular in the study of the human central motor pathways and the relation of brain activity and behavior. However, to date there is a remarkable lack of TMS studies with non-human primates. For the most part this is likely due to technical and procedural difficulties in implementing reliably this new technology with non-human animals. To this end we have successfully developed a computer-driven system that allows the reliable and fully integrated implementation of TMS with joystick-trained monkeys in a variety of motor and/or cognitive tasks.

5 **In the Privacy of their Own Homes: Racism Experiments and Surveys Conducted via the Internet**

David C. Evans, Union College
Nicholas R. Jones, Union College
evansd@union.edu

Mounting evidence suggests that computer-based assessments of taboo psychological issues reduce social-desirability distortion, particularly when people take part in such studies via the internet. This advantage has broad implications for research on racism. In 2 experiments on racial bias, web-based studies produced less distortion than laboratory studies, an effect attributable to increased distance from the experimenter more so than the digital modality or setting of participation. A 3rd study performed a replication with racism surveys.

Minutes of the Business Meeting of the Society for Computers in Psychology Thursday, November 15, 2001, Lake Buena Vista, Florida

1) The meeting was called to order by President Sarah Ransdell.

2) Secretary/Treasurer Christopher Wolfe reported that Dr. Curt Burgess was elected President-elect. Four new members were elected to the SCiP Steering Committee with 3-year terms ending in November 2004. They are Dr. Michael Birnbaum, Dr. Paula Goolkasian, Dr. Ken McGraw, and Dr. Larry Rosenblum. Chris thanked outgoing Past-President Walter Beagley, and outgoing members of the steering committee Margaret Anderson, Gerardo Gonzalez, and Ulf Reips for their years of excellent service. Wolfe also reported that on 11/8/01 SCiP had $15,129.46 in interest bearing accounts.

3) Program chair Paula Goolkasian reported that there were 31 paper presentations, a Presidential address, 2 invited papers by distinguished speakers, 7 poster presentations plus a workshop and vendor displays.

4) The recipient of the Castellan Prize was Matthew Pastizzo who received a complimentary subscription to BRMIC for one year and a check from SCiP for $100.

5) Jon Vaughan reported that 14 papers had already been received for the special May 2002 issue of BRMIC devoted to papers presented at SCiP.

6) Joe Young, from the National Science Foundation (NSF), reported the times and locations of the NSF poster sessions at the Psychonomics meeting. On a personal note, he indicated that he was retiring this year. SCiP members gave him an enthusiastic ovation for his many years of excellent service to the field.

Submitted by Secretary/Treasurer Christopher Wolfe

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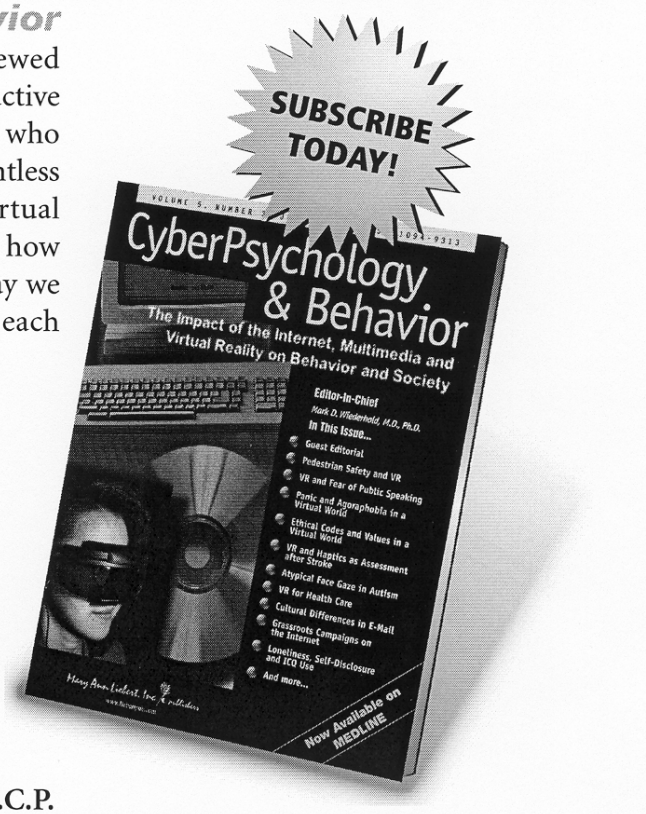

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- Internet Addiction
- Computer Phobia
- Social Isolation and Chat Rooms
- Neuropsychological Effects of Multimedia Systems
- The Virtual Therapist
- Delivery of Mental Health Services Over the Internet

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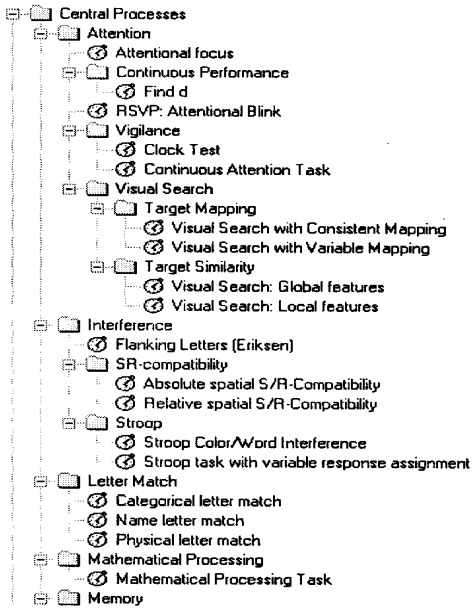

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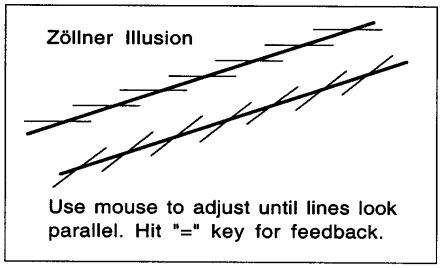

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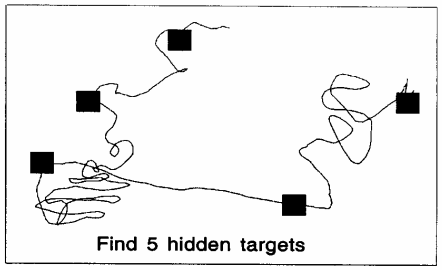

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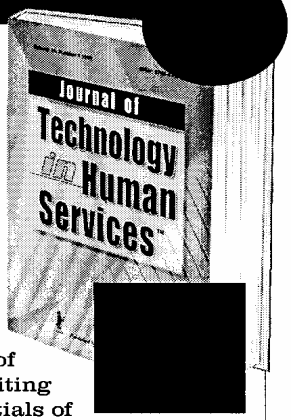

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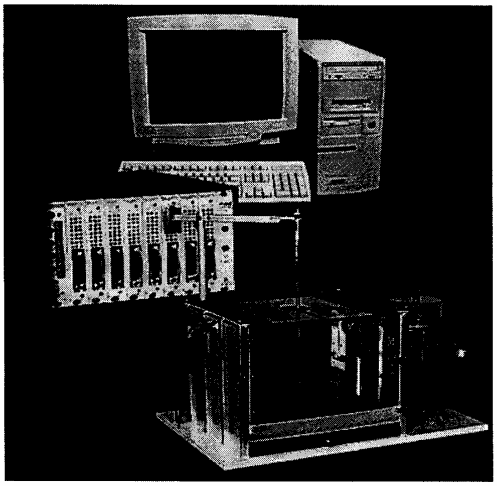

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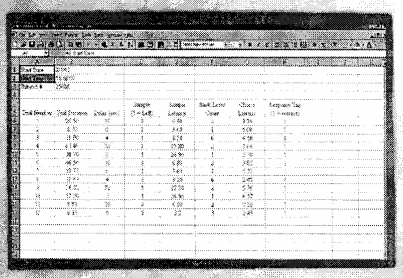

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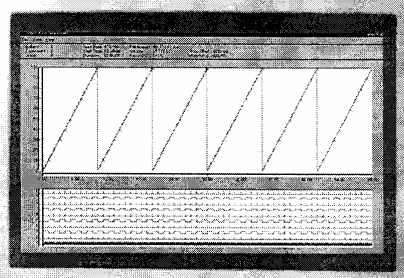

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