



# The Society for Computer Simulation International

## AUTHOR INSTRUCTIONS 2000 SYMPOSIUM ON PERFORMANCE AND EVALUATION OF COMPUTER & TELECOMMUNICATION SYSTEMS

July 16–20, 2000

Coast Plaza Hotel at Stanley Park, Vancouver, British Columbia, Canada  
PLEASE REVIEW THIS MATERIAL CAREFULLY—IT CONTAINS INFORMATION  
THAT HAS NOT PREVIOUSLY BEEN INCLUDED IN OTHER SCS AUTHOR KITS

Please direct inquiries and correspondence regarding *SPECTS 2000 Proceedings* to the SCS office. For registration and conference information see the registration form in this kit or contact the SCS office at:

The Society for Computer Simulation International  
4838 Ronson Court, Suite L, San Diego, CA 92111-1800  
Tel: (858) 277-3888; FAX: (858) 277-3930 ; E-mail: scs@scs.org

SCS Paper Code:

Primary Author:

Paper Title:

**DUE DATE: May 30, 2000**

### Dear Author:

I am pleased to inform you that your above-referenced paper has been accepted for presentation at this conference and for printing in the conference *Proceedings*.

**ACCEPTANCE IS CONDITIONAL UPON OUR RECEIVING YOUR FINAL CAMERA-READY PAPER BY THE DATE ABOVE AND/OR A PAID AUTHOR REGISTRATION FOR AT LEAST ONE OF THE AUTHORS OF EACH PAPER, AND ON A FINAL REVIEW OF THE CAMERA-READY PAPER. If your work must be cleared or approved before publication by your institution, company, or governmental agency, please be sure that process will be completed by the due date above or we will not be able to include it in the conference *Proceedings*. If the paper is not approved by that date, you can discuss the possibility of presenting it as a late paper with your Conference Chairman. **PLEASE NOTE: PAPERS CANNOT BE PUBLISHED IF PAYMENT (OR A PURCHASE ORDER) IS NOT RECEIVED BY THE CAMERA-READY DUE DATE.****

The enclosed author kit is provided to aid you in preparing your paper for publication in the *Proceedings* and in preparing your oral presentation for the conference. PLEASE FOLLOW THE INSTRUCTIONS CAREFULLY.

**PAGE LIMITS** — Papers accepted as FULL PAPERS are allowed a maximum of eight printed pages (without additional charges). Papers accepted as SHORT PAPERS are allowed a maximum of five printed pages (without additional charges). Additional pages will be assessed at \$40 per page. Please see the enclosed registration form for any further registration information.

**MULTIPLE PAPERS** — If you are presenting multiple papers please see enclosed author registration form for further information.

We have enclosed some guidelines you will find helpful as you prepare your oral presentation for the conference. Please note the list of audio-visual equipment which will be available for your use at the conference. If you require any other equipment, you must advise us well in advance and you are responsible for the cost. We will try to accommodate your needs without extra cost to you, but special orders may be charged directly to you.

# ITEMS WHICH MUST ACCOMPANY FINAL PAPER SUBMISSIONS

## MANUSCRIPT

Your manuscript in required format as assigned by conference chair, on high-quality bond paper. Manuscripts exceeding the allotted page limits (five pages for short papers, eight pages for long papers) will only be accepted with payment of the excess page charge of U.S. \$40 per page.

## PHOTOCOPIES

Four (4) photocopies must be included with the original manuscript. (There is a U.S. \$2.00 per page copying fee, if the copies are not sent with the manuscript. For example, if your manuscript is 6 pages, the copying fee for 4 copy sets would be \$48.00).

## REGISTRATION FORM AND PAYMENT

Payment of the fees is a requirement of having your paper published in the proceedings. If your paper and your payment are being processed separately, please include a note with registration form indicating such. The Advance Registration fee is associated with publication of the paper and is NOT REFUNDABLE, but is transferable to the designee who will present your paper at the conference. Authors of published manuscripts must pay the full registration fee.

## POSTCARD

Please legibly print your address on the enclosed postcard. It will be returned to you to acknowledge receipt of your paper.

## TRANSFER OF COPYRIGHT FORM

We require as a condition for acceptance of papers that all authors execute the copyright transfer to Simulation Councils, Inc., the name under which The Society for Computer Simulation International is incorporated. Please note that by signing the form you are simply giving your permission to SCS to publish the paper. For this reason, there is no problem if the material is already in the public domain, such as work done with government support. The Society for Computer Simulation International controls the commercial use of material we publish, while you or your company retain the right to reuse the work, in whole or in part.

## SPECIAL A/V REQUESTS

Please take a moment to include this information with your paper. An overhead (one will be in every room) or a 35mm projector (please request) is available at no charge. All other special requests require payment up front for their rental fees. For those who prefer to use a laptop computer for their presentation, a SVGA projection system will be available for a rental fee of \$100 per session. Availability is limited, and reservations are on a first come, first serve basis. ***We cannot guarantee that special A/V requests beyond the above listed will be available at the time of the conference without prior notification and payment.*** At the conference, you will be required to pay for any equipment at the Registration Desk at time of request.

## BIOGRAPHICAL NOTE

A brief note about you for use as introductory material by your session leader at the conference.

## INDIVIDUAL REPRINT ORDER FORM

Individual Reprint Order Form and prepayment, if desired. (optional)

**All material should include the SCS Paper ID Code (e.g., 2600, 9820, etc.) SCS is not responsible for correspondence or forms submitted without this code. When writing this code on your actual manuscript, do so on the back of each page.**

Thank you for your interest and cooperation. We hope that you will find participation in the conference professionally stimulating and rewarding. If you have any questions regarding the conference or your paper submittal, please call or write us.

**PLEASE DO NOT SEND YOUR CAMERA-READY MANUSCRIPT TO THE  
SCS OFFICE UNTIL YOU HAVE RECEIVED THE PROPER COMPANY,  
GOVERNMENT, OR SECURITY CLEARANCE.  
THANK YOU.**

1"  
6pts.

Text Begins Here  
(on subsequent pages)

Center Title Here (12-14 pts.)  
(ALL CAPS, one to three lines)

Center  
Name of Author(s)  
and Affiliation(s)  
(One to Five Lines)  
(Use Upper and Lower Case)

Text Begins Here  
(first page only)

$\frac{3}{4}$ "  
4p6

$\frac{1}{4}$ "  
1p6

$\frac{3}{4}$ "  
4p6

This sheet should act as a template for the form of your manuscript. ***Please keep your spacing as close to these figures as possible, to insure uniformity.*** Additional instructions may be found in this packet.

**When using A4 paper,** the size of the columns and the space between them should remain the same. The left and right margins should be 0.6" or 3p7, and the bottom margin should be 2" or 12p.

1  $\frac{1}{4}$ "  
7p6

# INSTRUCTIONS FOR PREPARATION OF MANUSCRIPT

Because of the proliferation of laser printers, SCS feels it is now possible to achieve high-quality, camera-ready copy on standard 8 1/2" × 11" sheets. Authors outside the USA may use standard A4 paper. **If you do not have access to a laser printer, you must use the oversized mats.** Call the SCS office (858) 277-3888; FAX: (858) 277-3930; E-mail: scs@sdsc.edu and we will send these to you. Oversized mats are available by request only.

The *Proceedings* will be printed directly from the manuscripts submitted by authors (If the larger mats are used, the printing will include reduction of each page to 8 1/2" × 11" in the *Proceedings*.) It is important to note that the appearance of your paper in the *Proceedings* will depend largely upon the care you take in preparing the original manuscript and graphic material. **SCS is not responsible for replacing or correcting papers or pages. Please be sure your camera-ready paper is free of typographical errors and omissions before sending it to SCS.**

## TYPING AND LAYOUT SHEETS

PLEASE FOLLOW THE SAMPLE PRINTOUT FOR GUIDELINES ON MARGINS, LAYOUT STYLE, ETC.

1. Manuscripts must be typed two columns to a page. Use one side of sheet only.
2. Your text should be no smaller than 8 point type, and no larger than 10 point. Choose a standard font such as Times, Palatino, Optima or Helvetica.
3. The text need not be right justified (squared off on the right).
4. Text should be single-spaced, with double spacing between paragraphs, and with a 5-space paragraph indentation.
5. Manuscript pages must be kept clean. Bad erasure marks, strikeouts (even with correction paper), or smudges will show up in the printed volume. In the case of an error, new lines or paragraphs may be pasted over old areas, if the length is the same. Correction paint may also be used if applied carefully and completely.
6. The title and author information should be centered.

## HEADINGS

### TITLE OF PAPER

Type the title in capital letters, centered on the page horizontally, 1" from the top edge of the first page. Space down three lines, then type the name of the author (first name first), author's business or school affiliation, complete address, and e-mail using upper and lower case letters. Make it a complete mailing address, for example,

A GENERAL MODEL OF INFORMATION TRANSFER  
Mary M. Doe and John J. Smith  
Department of Computer Science  
*University of Anytown*  
Anytown, California 92000  
e-mail: doe@anytown.edu

### KEYWORDS

Begin each paper with a list of no more than five keywords. It should start in the left column, approximately 3 lines below the author address. Use the list of "Partial List of Frequently Used Keywords," as your guide.

## ABSTRACT

After Keyword Listing, begin each paper with an abstract (100-200 words) that summarizes the topic and important results presented in the paper. Start with the abstract heading, typed in caps, beginning with the left-hand margin. Underline or bold the heading. Skip a line space, then begin the abstract.

## MAJOR HEADINGS

Type in capitals, beginning flush with left-hand margin. Underline or bold. Skip a line space, then begin text.

### Subheadings

Capitalize the first letter of each word, beginning flush with left-hand margin. Underline or bold. Skip a line space, then begin text.

**Secondary Subheadings.** Capitalize the first letter of each word. Indent 5 spaces from the left-hand margin. Underline or bold. Text follows on the same line.

---

## FOOTNOTES

Use footnotes sparingly. Begin two line spaces from previous text by typing a short horizontal line, using the underscore key 13 times. Skip 1/2 or one line space, type footnote symbol, then type footnote.\*

---

## REFERENCES

In text, references should be cited by the last name of the author and the year of publication, all in parentheses. The Reference List should be organized alphabetically by the name of the author, followed by the author's initials, year of publication, and other complete information about the published work. It should not be numbered. Only references that may be readily obtained should be cited in the list. Others may be referred to as "personal communication" in the text. In the reference list, multiple entries with the same author are arranged chronologically. Italicize the name of the publication in which the article is found, or the title itself if a separate publication (underline if italicizing is not possible). For laboratory, company, or government reports, all information on how to obtain the report should be included. For Ph.D. and M.S. theses, the institutions granting the degree should be given. References to proceedings should include the full name of the proceedings, how to obtain it, year of publication, and page numbers of article cited. A reference to part of a book should include the range of pages in which the material is cited. Names of periodicals should be written out in full, and the range of pages cited. For style and consistency, *The Chicago Manual of Style* will govern.

---

## EXAMPLES

### IN TEXT:

(Smith 1978)

Jones and Miller 1983)

(Arthur *et al.* 1985) if more than three authors

(Andrews 1982a) a trailing lowercase letter should distinguish multiple papers by the same author(s) published during a single year.

(Dijkstra 1972; Hoare *et al.* 1980; Smith and Kim 1984b)

### IN REFERENCE LIST:

#### JOURNAL:

Balci, O. and R.G. Sargent. 1981. "A Methodology for Cost-Risk Analysis in the Statistical Validation of Simulation Models." *Communications of the ACM* 24, no. 4 (Apr.): 19-197.

#### BOOK:

Felker, D.B.; F. Pickering; V.R. Charrow; V.M. Holland; and W.L. Harper. 1980. *Data Processing Documentation: Standards, Procedures and Applications*. Prentice-Hall, Englewood Cliffs, N.J.

---

\* Footnote symbols follow the conventional order of asterisk (\*), then double asterisk (\*\*), dagger (†), then double dagger (‡).

**BOOK CHAPTER:**

Balci, O. and R.G. Sargent. 1983. "Validation of Multivariate Response Trace-Driven Simulation Models." In *Performance '83*, A.K. Agrawalla and S.K. Tripathi, eds. North Holland, Amsterdam, 309-323.

**CONFERENCE PROCEEDINGS:**

Gass, S.I. 1978. "Computer Model Documentation." In *Proceedings of the 1978 Winter Simulation Conference* (Miami Beach, FL, Dec.4-6). IEEE, Piscataway, N.J., 281-287.

**SPECIAL PUBLICATION:**

National Bureau of Standards. 1976. *Guidelines for Documentation of Computer Programs and Automated Data Systems*. Federal Information Processing Standards Publication 38. Government Printing Office, Washington, D.C. (Feb.).

**TECHNICAL REPORT:**

Balci, O. 1985. "Guidelines for Successful Simulation Studies." Technical Report TR-85-2. Department of Computer Science, Virginia Tech, Blacksburg, Va. (Nov.).

**RESEARCH REPORT:**

Iglehart, D.L. and G.S. Shedler. 1983. "Simulation Output Analysis for Local Area Computer Networks." Research Report RJ 4020 (45068). Research Division, IBM, San Jose, CA (Sept.).

---

**PAGE NUMBERING AND PAPER IDENTIFICATION**

**DO NOT TYPE PAGE NUMBERS.** Simply write the sequential numbers and total number of pages to your paper **on the back of each page** (e.g., 1 of 6, 2 of 6, etc.). Final page numbers will be inserted by the publisher.

Print your paper code (assigned by SCS) **on the back of each page** of the original manuscript and on the first page of all copies, in pencil only. Write the first author's last name on the back page just above the page numbering. This is for handling and identification purposes only and will not be reproduced.

---

**TABLES AND ILLUSTRATIONS**

All artwork, figures, captions, graphs, and tables will be reproduced exactly as you submit them. In the interest of clarity and uniformity, graphs and tables should be kept within a single column, if possible. If not, extension across two columns is permissible. If pasting on a table or graph, tape is permissible. Also, any type of paper glue is permissible.

If you include photographs, convert them into Velox prints or halftones (screened reproductions) and paste or tape them into place. An 85-line screen is recommended.

---

**BIOGRAPHY**

If space permits, it is worthwhile to include a brief biography (no more than 300 words) of the author(s) at the end of the manuscript. This allows the viewing and reading audience to become familiar with the background of the author, thus giving the paper greater impact and validity.

**IF YOU HAVE ANY QUESTIONS REGARDING THE PREPARATION OF MANUSCRIPTS, IT IS BEST TO HAVE THEM ANSWERED NOW — CONTACT THE SCS OFFICE FOR ANY CLARIFICATION.**

# SPEAKER'S INSTRUCTIONS

## INTRODUCTION

Good visual aids can greatly enhance the effect your presentation has on the audience. Experience at past conferences has shown that many of the oral presentations have not been adequately prepared. Often an attempt was made to present too much material and too much detail. Visual aids, the primary means to hold the attention of the audience, were often poorly conceived and inadequately prepared. It is our hope that these guidelines will help you prepare a better visual presentation.

SCSC 2000 plans call for the nominal session to run 90 minutes without a break and to include four papers. This allows 5 minutes for introductions and then 20 minutes per paper, of which 5 minutes should be reserved for audience questions and comments.

**REMEMBER, your entire paper is published in the *Proceedings*.** Your objective in the oral presentation should be to describe the highlights of your paper, progress since the paper was written, and future plans. Do NOT try to present the paper in its entirety, or to read it!

## PREPARATION OF PRESENTATION

### BASIC ORGANIZATION

The most significant constraint facing the speaker is the time limit for presentation. As described above, presentations are nominally allotted 20 minutes, followed by 5 minutes for questions and discussion. This allows time to speak about 2000 words -- far less than the size of a paper.

This time limit also restricts the number of concepts or major technical points that can be made by the speaker and absorbed by the audience. As a guideline, it is suggested that a presentation cover no more than 10 technical points.

Logically linked by the theme of the paper, each of these technical points can be expressed as a declarative statement, substantiated with supporting material. Though the selection of no more than 10 significant points may seem like a great hardship, it will enhance the audience appreciation of a paper by focusing on the most significant information.

### VISUAL AIDS

The best way to present material in a limited time period is to use well-conceived visual aids that support each of the points to be made. As a first approximation, the speaker should PLAN FOR overhead foils or "VIEWING FRAMES" FOR EACH OF THE 10 TECHNICAL POINTS to be presented. All rooms will be set up for overhead presentations. Any additional audio-visual requirements must be arranged through the SCS office prior to the conference.

Visual aids significantly simplify the presentation task. They simultaneously focus the audience attention and provide cues for the speaker. The speaker should plan to speak about all of the material on a foil (or it shouldn't be there) before amplifying a single item.

In general, include no more than six supporting concepts on each foil presenting one technical point. If there are more, simply select the most pertinent. Remember once again, visual aids are not a complete reconstruction of the manuscript. The full story appears in the *Proceedings* and visual aids are only attention-focusing cues for the most interesting highlights.

## TIMING

A speaker can expect to speak about SIX SENTENCES PER OVERHEAD, WHICH NORMALLY RUNS ABOUT 120 WORDS OR 1 TO 1.5 SPOKEN MINUTES. Since a speaker will have ten OVERHEAD FOILS, the basic presentation will run ten minutes. This allows 5-10 minutes to title, identify, and summarize the basic material, recognizing that audience receptiveness peaks at the beginning and conclusion of each talk.

## SPEAKER ATTITUDE AND SPONTANEITY

The primary advantage for the speaker who organizes his presentation in this manner is that he can approach the audience with the assurance that HE CAN EASILY AND EFFECTIVELY PRESENT THE SALIENT POINTS IN HIS PAPER.

Since the speaker is cued by his overhead foils, and since he certainly can speak to any of the technical points he has selected for at least one minute, the speaker no longer needs a written speech or even prepared notes. Thus, a measure of spontaneity can enter the technical presentations.

## DEVIATIONS FROM GUIDELINES

The Session Chairperson makes the final decisions regarding timing of presentations, subject to the constraint that all papers in the session must be completed within the time allotted. Any deviations from these guidelines should be approved by the Chair.

## SPEAKER'S BREAKFAST

On the morning of your presentation, a Speaker's Breakfast will be held for you to meet with your Session Chair and Co-Presentors. This meeting is mandatory.

# Help Model the Future, Join SCS Today

If you are not already a member of *the Society for Computer Simulation International (SCS)*, *NOW* is the perfect time to join. The importance and usefulness of computer simulation has grown at a pace equal to the recent innovations in hardware and technology, and **SCS** has grown with it. To stay current and competitive in your field you need to keep up with these changes -- perhaps even guide them. **SCS** exists to help you do just that. Simply fill out the enclosed membership form and return it with your registration form to take full advantage of all that **SCS** has to offer.

Established in 1952, *The Society for Computer Simulation International (SCS)* is the only technical society dedicated to advancing the use of computer simulation to solve real world problems. **SCS membership** represents a worldwide network of professionals committed to guiding the growth and acceptance of computer simulation. Through regional councils in North America, the European economic community, and the Pacific Rim nations, **SCS conferences** present the opportunity to network, join technical committees, organize a session, or publish a paper within your field of expertise. The monthly journal *SIMULATION*, the quarterly journal *TRANSACTIONS*, and *The Directory of Simulation Software* are a few **SCS publications** that keep our members current with advancements in simulation technology.

Be an active member of **SCS** and help model the future.

## LIST OF AUDIO-VISUAL EQUIPMENT

### OVERHEADS/ 35MM PROJECTORS

Each meeting room will be equipped with an overhead unit for  $8\frac{1}{2} \times 11$  transparencies. 35mm slide projectors will be made available **ONLY BY ADVANCED REQUEST** with the SCS office.

### VIDEO EQUIPMENT

Those who wish to make presentations via videotapes must **MAKE ARRANGEMENTS TO PAY FOR THE EQUIPMENT THEMSELVES**. Authors should remember that video equipment and computer projector rental rates are relatively high (\$125-\$300 PER DAY) and the 21" or 25" screens are undesirable for use with an audience of over 40 attendees.

### LCD PROJECTOR

LCD projectors must be reserved with the SCS Office prior to the conference. Cost is \$100.00 per presentation (based on availability).

### MICROPHONES/AMPLIFICATION EQUIPMENT

This will be available for every meeting room where more than 40 attendees are expected.

### COMPUTERS

Speakers bringing microcomputers for demonstration during their session should notify the SCS office *at least four weeks in advance* of the meeting so that a table and power will be available. Speakers are responsible for their computer systems and must **MAKE ARRANGEMENTS TO PAY FOR THE EQUIPMENT THEMSELVES**. SCS accepts no liability for them.

## LIST OF AUDIO VISUAL NEEDS

PAPER NO. \_\_\_\_\_

*List Audio/Visual needs:*

---

---

**To help SCS market the SCSC 2000 more effectively, please answer the following questions:**

*Target audience of or your paper:*

---

---

*List of Hardware/Software used in your paper:*

---

---

**Vendors you feel will enhance the conference Exhibits Area. Please list company, phone number and contacts.**

---

---

Group: \_\_\_\_\_

Session: \_\_\_\_\_

Day: \_\_\_\_\_

**PLEASE RETURN THIS COMPLETED FORM TO:**

**SCS  
4838 Ronson Court, Suite L  
San Diego, California 92111-1800**

**AUTHOR'S BIOGRAPHY**

Instructions: You may use this form or if you already have a biography you may use it. This is simply to provide your session leader with enough information to introduce you. Authors are encouraged to include a brief biography at the end of their paper if space permits.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

Present Employer: \_\_\_\_\_

Duties or Job: \_\_\_\_\_

Highlights about your present work: \_\_\_\_\_

\_\_\_\_\_

Past Employment: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Education: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Civic and professional activities, awards etc.: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other: \_\_\_\_\_

\_\_\_\_\_

Group: \_\_\_\_\_ Session: \_\_\_\_\_ Day: \_\_\_\_\_

# PARTIAL LIST OF FREQUENTLY USED KEYWORDS

**AUTHORS:** Using this list as a guide, select no more than five (5) keywords indicating subject areas applicable to your paper. These will be used in the indexing of your paper.

## APPLICATIONS \_\_\_\_\_

Aerospace  
Agriculture  
Automatic control  
Behavioral science  
Biology  
Business  
Chemical engineering  
Civil engineering  
Communications  
Computer-aided design  
Computer aided manufacturing  
Computer performance  
Computer software  
Computer systems  
Control systems  
Corporate planning  
Criminology  
Cybernetics  
Ecology  
Education  
Electrical engineering  
Electronics  
Energy  
Environmental science  
Finance  
Forestry  
Geophysics  
Government  
Graphics  
Health care  
Health sciences  
Hydrology  
Image processing  
Industrial control  
Industrial engineering  
Industrial processes  
Information systems  
Labor  
Management science  
Manufacturing  
Marine  
Marketing  
Mechanical engineering  
Military  
Natural resources  
Naval  
Neurosciences  
Nuclear engineering  
Operations research  
Pattern recognition  
Petroleum engineering  
Pharmacokinetic  
Physics  
Physiology  
Political science  
Production  
Psychology  
Resource Management  
Signal processing  
Social science  
Speech recognition

Telecommunications  
Test equipment  
Thermodynamics  
Transportation  
Trainers  
Urban affairs  
VLSI and Simulation

## COMPUTERS AND COMPONENTS \_\_\_\_\_

Analog computers  
Analog/digital converters  
Array processors  
Calculators  
Communications processors  
Distributed processors  
Function generators  
Hybrid computers  
Man-machine interfaces  
Microcomputers  
Multiprocessors  
Personal computers  
Signal processors  
Simulators  
Special-purpose processors

## LANGUAGES \_\_\_\_\_

Combined (continuous/discrete)  
Continuous  
Discrete  
Financial planning  
Network  
Specific language used:

## MANAGEMENT AIDS \_\_\_\_\_

Decision-making  
Decision support systems  
Forecasting  
Management games  
Policy-making  
Risk analysis

## MATHEMATICAL METHODS \_\_\_\_\_

Data enrichment  
Differential equations  
Dynamic programming  
Error analysis  
Estimation  
Filtering  
Function generation  
Integration  
Least-squares methods  
Linear programming  
Mathematical programming

Nonlinear programming  
Numerical methods  
Optimization  
Partial differential equations  
Random number generation  
Regression analysis  
Sampling  
Spectral analysis  
Statistical analysis  
Stiff equations  
Time Series analysis  
Transforms

## MODEL AND SIMULATION MANAGEMENT \_\_\_\_\_

Computer-aided analysis  
Documentation  
Model acceptance  
Model analysis  
Model credibility  
Model design  
Model evaluation  
Model testing  
Model transfer  
Software cost analysis  
Software engineering  
Software management  
Standards  
Name of model used:

## MODELING METHODOLOGY \_\_\_\_\_

Approximation techniques  
Arrival generation  
Bond graphs  
Delphic techniques  
Model reduction  
Parameter identification  
Performance analysis  
Sensitivity analysis  
Truncation error  
Validation  
Variance reduction  
Verification

## SIMULATION METHODS \_\_\_\_\_

Combined simulation  
Continuous simulation  
Discrete simulation  
Emulation  
Gaming  
Hybrid simulation  
Interactive simulation  
Man-in-the-loop simulation  
Real-time simulation  
System dynamics

## SOFTWARE \_\_\_\_\_

Database management systems  
Differential equation solvers  
Graphics packages  
Interactive programs  
Microprogramming  
Operating systems  
Program generators  
Report generators  
Statistical packages

## SYSTEM OPERATION \_\_\_\_\_

System analysis  
System engineering  
System identification  
System management

## THEORY \_\_\_\_\_

Catastrophe  
General systems  
Philosophy

## TYPES OF MODELS \_\_\_\_\_

Compartmental  
Corporate  
Decision  
Deterministic  
Dynamic  
Econometric  
Event-oriented  
Feedback  
Global  
Grid  
Hierarchical  
Interactive  
Linear  
Lumped parameter  
Markov-chain  
Matrix  
Meta  
Microanalytic  
Monte Carlo  
National  
Network  
Nonlinear  
Qualitative  
Queuing  
Probabilistic  
Process-oriented  
Real-time  
Regional  
Stochastic  
Topological  
Vector  
World

**PLEASE RETURN THIS COMPLETED FORM TO SCS**

**TRANSFER OF COPYRIGHT TO  
SIMULATION COUNCILS, INC.  
(The Society for Computer Simulation International)**

Present title of work: \_\_\_\_\_

\_\_\_\_\_

Author (s): \_\_\_\_\_

\_\_\_\_\_

Conference: \_\_\_\_\_

**IMPORTANT NOTE: The primary author must sign this form.**

I hereby transfer exclusively to Simulation Councils, Inc. (SCi) all rights granted to me by the copyright laws of the United States of America and other countries, subject to the reservations below.

1. The transfer of copyright shall become effective only upon SCi's acceptance for publication of the work.
2. The authors reserve all proprietary rights (such as patent rights) in this work other than the copyright transferred to SCi by this document.
3. After this work has been published by SCi, the author retains the right to republish it in whole or in part in any book of which he is an author or editor and to make personal use of this work in lectures, courses, or otherwise.
4. If this work is in the public domain, such as government work, I simply authorize its publication.
5. If this work is subject to security clearance I certify that as of the date below it has been cleared.

I warrant that the above work has not been previously published elsewhere, or, if it has, that I have obtained permission for its publication by SCi and that I will promptly supply SCi with wording for crediting the original publication and copyright owner.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of primary author

\_\_\_\_\_  
Print name

Please return executed copy of this form to:

**The Society for Computer Simulation International  
4838 Ronson Court, Suite L  
San Diego, CA 92111-1800**

**The Society for Computer Simulation International**  
**INDIVIDUAL REPRINT ORDER FORM**

Publication/Conference: \_\_\_\_\_ SPECTS 2000 Paper No.: \_\_\_\_\_

Author(s): \_\_\_\_\_

Title: \_\_\_\_\_

Ordered by: \_\_\_\_\_ Telephone Number:( \_\_\_\_\_ ) \_\_\_\_\_

Standard reprint is 8<sup>1</sup>/<sub>2</sub> × 11, 50# White Offset,  
 Black Ink, Stapled. Minimum Order: 100 copies.

***All Reprint Orders must be Prepaid***

ORDER INFORMATION	AMOUNT						
First 100 copies: _____ pages @ \$28.00 per page	U.S. \$ _____						
Each additional 100 copies: _____ hundred × _____ pages @ \$9.00 per page	_____						
Standard Covers: <input type="checkbox"/> Yes <input type="checkbox"/> No							
First 100: _____ @ \$69.00 per hundred	_____						
Additional: _____ hundred @ \$28.00 per hundred	_____						
Special Covers: <input type="checkbox"/> Yes <input type="checkbox"/> No	_____						
<i>(Call the SCS office for information)</i>							
<b>Late Charges:</b> \$35.00 for orders received <b>after</b> publication Offset press (necessary for clear reproduction of photographs). <b>Additional</b> \$65.00	_____						
Special Shipping: _____	_____						
<table style="width: 100%;"> <tr> <td style="width: 60%;"><b>PAYMENTS:</b> All checks must be in U.S. funds drawn on a U.S. bank. Make check payable to SCS. Include Purchase Order number if applicable:</td> <td style="width: 40%;">TOTAL AMOUNT: _____</td> </tr> <tr> <td>_____</td> <td>TOTAL REMITTED: _____</td> </tr> <tr> <td></td> <td>BALANCE DUE: _____</td> </tr> </table>		<b>PAYMENTS:</b> All checks must be in U.S. funds drawn on a U.S. bank. Make check payable to SCS. Include Purchase Order number if applicable:	TOTAL AMOUNT: _____	_____	TOTAL REMITTED: _____		BALANCE DUE: _____
<b>PAYMENTS:</b> All checks must be in U.S. funds drawn on a U.S. bank. Make check payable to SCS. Include Purchase Order number if applicable:	TOTAL AMOUNT: _____						
_____	TOTAL REMITTED: _____						
	BALANCE DUE: _____						
Charge to: <input type="checkbox"/> AMEX <input type="checkbox"/> VISA <input type="checkbox"/> MASTERCARD    Auth. Number: _____							
Auth. Signature: _____	Exp. Date: _____						
Federal Tax I.D. Number: #95-6059107							

**COVER NOTE:** Standard cover depends on original book cover design. It will be the same as original cover if order is received in time. Otherwise, it will be a black and white reproduction. Our graphics department will use their best judgement, unless you specify otherwise. Special colors or imprinting will be at an additional cost. Request estimate in advance.

**SHIPPING:** All shipments are sent surface mail unless another method is requested. The cost of special shipping will be billed to you. Shipments are made approximately 30 days after the date of the conference, or receipt of order, whichever is later. Outside North America please allow 90 days for delivery by surface mail.

**SHIPPING LABEL MUST BE FILLED OUT COMPLETELY      PLEASE PRINT LEGIBLY**

---

TO: \_\_\_\_\_

NAME \_\_\_\_\_

AFFILIATION \_\_\_\_\_

SHIPPING ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ COUNTRY/STATE \_\_\_\_\_ ZIP/POST OFFICE \_\_\_\_\_

# SCS INTERNATIONAL MEMBERSHIP APPLICATION

## HOME ADDRESS

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ M.I. \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Country: \_\_\_\_\_  
Telephone: ( \_\_\_\_\_ ) \_\_\_\_\_ Fax: ( \_\_\_\_\_ ) \_\_\_\_\_  
E-mail: \_\_\_\_\_

## BUSINESS ADDRESS

Position or Title: \_\_\_\_\_  
Organization/Company: \_\_\_\_\_  
Department: \_\_\_\_\_  
Employer Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Country: \_\_\_\_\_  
Telephone: ( \_\_\_\_\_ ) \_\_\_\_\_ Fax: ( \_\_\_\_\_ ) \_\_\_\_\_  
E-mail: \_\_\_\_\_

## MAILING

Mailing Address:  Home  Business Billing Address:  Home  Business

## DEMOGRAPHIC

Job Sector:  Government  Industry  Academia  Consultant  Other: \_\_\_\_\_  
Job Function: \_\_\_\_\_  
Highest Degree: \_\_\_\_\_ Year of Degree: \_\_\_\_\_  
How many years have you been working in simulation or a related field: \_\_\_\_\_  
Gender:  Male  Female Date of Birth (D/M/Y): \_\_\_\_ / \_\_\_\_ / \_\_\_\_

## ANNUAL MEMBERSHIP DUES

Full Member @ \$85.00 (U.S.) per year  
 Associate Member @ \$85.00 (U.S.) per year  
 Student Member @ \$22.00 (U.S.) per year  
 1 year  2 year  3 year payment MEMBERSHIP FEES \$ \_\_\_\_\_

## PUBLICATIONS

**Dues for membership to SCS include a subscription to the monthly journal *SIMULATION*.**

In addition SCS members may elect to receive additional publications at discounted prices.

Please check the appropriate line.

*TRANSACTIONS* Subscription (Quarterly) @ \$40.00 (U.S.) per year  
 SCS Membership Directory @ \$10.00 (U.S.) per year  
 2000 Simulation Software Directory @ \$25.00 (U.S.) per year  
PUBLICATION FEES \$ \_\_\_\_\_

## PAYMENT METHOD

Payment enclosed. Make checks payable to SCS  
 Credit card payment  
Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
Signature: \_\_\_\_\_  
TOTAL AMOUNT DUE \$ \_\_\_\_\_  
Bill my:  Mastercard  Visa  AMEX

**Do NOT forget to fill in the other side. This will enable SCS to give added value to your subscription.  
Enclose payment and drop in the mail or FAX both sides of the application form to: (858) 277-3930.**

# PROFESSIONAL AND TECHNICAL INTERESTS

## PROFESSIONAL/TECHNICAL COUNCILS

The following professional/technical member councils represents the major areas of interest within SCS. Each of these councils has an elected representative in the Board of Directors, and thereby influences the policy and technical priorities of SCS. Choose **up to two areas** of interest by indicating your first and second choice.

- Simulation Theory and Methodology
- Simulation Technologies
- Simulation of Engineering Applications
- Simulation in Business, Economics, and Finances
- Simulation in Natural Sciences and Medicine
- Simulation Applications for Education and Public Service

## TECHNICAL INTERESTS

Knowing your technical interest areas assists SCS to better serve your needs. Choose **up to five areas** you are actively interested in:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aerospace                               | <input type="checkbox"/> Electro-Optics                                   | <input type="checkbox"/> Operations Research               |
| <input type="checkbox"/> Agent Based Simulation                  | <input type="checkbox"/> Emergency Planning and Management                | <input type="checkbox"/> Parallel and Distributed          |
| <input type="checkbox"/> Air Traffic Control                     | <input type="checkbox"/> Energy   | <input type="checkbox"/> Physical Sciences                 |
| <input type="checkbox"/> Applied Mathematics                     | <input type="checkbox"/> Experimental Design                              | <input type="checkbox"/> Power Plant Simulation            |
| <input type="checkbox"/> Artificial Intelligence, Expert Systems | <input type="checkbox"/> Financial Planning                               | <input type="checkbox"/> Process Engineering               |
| <input type="checkbox"/> Automotive Systems                      | <input type="checkbox"/> Geophysical Systems                              | <input type="checkbox"/> Qualitative Simulation            |
| <input type="checkbox"/> Biomedical and Medicine                 | <input type="checkbox"/> Government                                       | <input type="checkbox"/> Queueing Systems                  |
| <input type="checkbox"/> Bond Graph Modeling                     | <input type="checkbox"/> High Performance Computing                       | <input type="checkbox"/> Real Time Systems                 |
| <input type="checkbox"/> Business Applications                   | <input type="checkbox"/> Human Factors                                    | <input type="checkbox"/> Robotics                          |
| <input type="checkbox"/> CAD/CAM/CIM                             | <input type="checkbox"/> Industrial Engineering                           | <input type="checkbox"/> Scheduling                        |
| <input type="checkbox"/> Chemical Engineering                    | <input type="checkbox"/> Information Systems and Decision Support Systems | <input type="checkbox"/> Simulation Languages              |
| <input type="checkbox"/> Civil Engineering                       | <input type="checkbox"/> Inventory and Production                         | <input type="checkbox"/> Spreadsheet Modeling              |
| <input type="checkbox"/> Computer Architecture                   | <input type="checkbox"/> Life Sciences                                    | <input type="checkbox"/> Standards                         |
| <input type="checkbox"/> Computer Networks                       | <input type="checkbox"/> Management Science                               | <input type="checkbox"/> Statistics                        |
| <input type="checkbox"/> Continuous Systems                      | <input type="checkbox"/> Manufacturing                                    | <input type="checkbox"/> System Dynamics                   |
| <input type="checkbox"/> Control Engineering                     | <input type="checkbox"/> Marine Applications                              | <input type="checkbox"/> Telecommunications Systems        |
| <input type="checkbox"/> Discrete Systems                        | <input type="checkbox"/> Military   | <input type="checkbox"/> Training Simulators               |
| <input type="checkbox"/> Distributed Interactive Simulation      | <input type="checkbox"/> Mission Earth, Environmental Simulation          | <input type="checkbox"/> Transportation and Traffic        |
| <input type="checkbox"/> Economics                               | <input type="checkbox"/> Neural Networks                                  | <input type="checkbox"/> Verification, Validation          |
| <input type="checkbox"/> Education                               | <input type="checkbox"/> Object Oriented Simulation                       | <input type="checkbox"/> Virtual Reality                   |
| <input type="checkbox"/> Electronics                             |   | <input type="checkbox"/> Visualization, Graphics Animation |
|  |   | <input type="checkbox"/> <b>Other:</b> _____               |

## BECOMING ACTIVE IN THE SOCIETY

- I would be willing to review technical articles for The Society in my fields of interest
- I would like to become active in simulation conferences
- I would like to do the following: \_\_\_\_\_

## OTHER INFORMATION

What kind of hardware and software are you using for your **simulation** area?

Hardware: \_\_\_\_\_

Software: \_\_\_\_\_

- I do not want my address given to other SCS members with the same interest areas.
- I do not want my address information to go outside of SCS

**Return to: SCS Membership, P.O. Box 17900, San Diego, CA, USA 92177-7900**



# The Society for Computer Simulation International

## 2000 SYMPOSIUM ON PERFORMANCE AND EVALUATION OF COMPUTER & TELECOMMUNICATION SYSTEMS

July 16-20, 2000

Coast Plaza Hotel at Stanley Park, Vancouver, British Columbia, Canada

### REGISTRATION FORM

***This registration form must be completed and returned with your manuscript. Registration fee must be guaranteed by receipt of check or credit card number for paper inclusion in conference proceedings. Registration is not refundable.***  
Registration fee includes: attendance at the conference, authors breakfast, copy of the Proceedings and any planned social function.

Author name: (for badge) \_\_\_\_\_ Position: \_\_\_\_\_

Organization: (for badge) \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Country: \_\_\_\_\_ ZIP: \_\_\_\_\_

Business Phone: \_\_\_\_\_ Home Phone: \_\_\_\_\_

FAX: \_\_\_\_\_ e-mail: \_\_\_\_\_

Paper Title (1): \_\_\_\_\_ Paper #: \_\_\_\_\_

Paper Title (2): \_\_\_\_\_ Paper #: \_\_\_\_\_

Please check appropriate box to indicate your position in the Conference organization

Track Chair  Group Chair  Session Chair  Author/Presenter  Panel Chair  Panelist

#### CONFERENCE FEES

Member #: \_\_\_\_\_

**(Authors of published manuscripts must pay full registration fee)**

<b>Registration for 1st paper</b>	Early ( <i>before 6-30-00</i> ):	Late ( <i>after 6-30-00</i> ):	
SCS Members:	\$395.00	\$455.00	
Non-Members:	\$480.00	\$540.00	\$ _____

Extra page charges (**\$40 per page over the specified page limit**): \$ \_\_\_\_\_

<b>Registration for 2nd paper</b>		
Members:	\$395 or \$40 per page, whichever is less	
Non-members:	\$440 or \$40 per page, whichever is less	\$ _____

**SCS Membership Dues** (Check here and enclose membership application)

**TOTAL\* \$ \_\_\_\_\_**

#### Method of Payment: (*No cash accepted*)

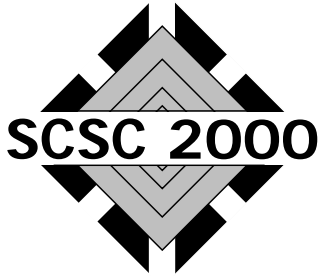
VISA  Mastercard  American Express  Check\*  Company Purchase Order  Gov't DD Form 1556

Card Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Authorizing Signature: \_\_\_\_\_

**\* All Checks must be made payable to SCS and drawn on U.S. banks or International Money Orders in U.S. funds**

# The Society for Computer Simulation International



2000 SUMMER COMPUTER SIMULATION CONFERENCE &  
2000 SYMPOSIUM ON PERFORMANCE AND EVALUATION OF  
COMPUTER & TELECOMMUNICATION SYSTEMS

July 16-20, 2000

Coast Plaza Hotel at Stanley Park, Vancouver, British Columbia, Canada

## HOTEL RESERVATION FORM

Reservations must be received by June 30, 2000 to qualify for conference rate, those received after this date will be accepted on a space available basis only.

Please reserve accommodations for:

Name(s): \_\_\_\_\_

Company: \_\_\_\_\_ No. of Guests: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Phone Number: \_\_\_\_\_ FAX Number: \_\_\_\_\_

Arrival Date: \_\_\_\_\_ Departure Date: \_\_\_\_\_

Credit Card Type: AMEX VISA Mastercard Discover Diner's Club  
(circle one)

Credit Card Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Cardholder's Name: \_\_\_\_\_

***Hotel check-in is 3:00 p.m. and check-out is 12:00 p.m.***

One nights deposit or a credit card number must accompany this form for reservations to be guaranteed. 72 hours notice of cancellation is required for refund of deposit. Only a certain number of rooms have been reserved at the discounted group rate. Please make your reservations as soon as possible.

Room Preference:  Smoking  Non-Smoking (subject to availability)  
 One bed (king)  Two beds (double)

**Room Rate:** Standard Room:\$160/\$180 (Canadian Dollars)  
1 Bedroom Suite:\$210/\$230 (Canadian Dollars)

\$20.00 per night for each additional person in rooms with more than 2 people.

***Please return this reservation request to:***  
**Coast Plaza Suite Hotel at Stanley Park**  
**Reservations**  
**1763 Comox Street**  
**Vancouver, British Columbia**  
**Canada V6G 1P6**  
**Phone: 800-663-1144 • 604-688-7711**  
**FAX: 604-688-0885**