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**INSTITUTE FOR OPERATIONS RESEARCH  
AND THE MANAGEMENT SCIENCES**

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**President's Message**

Greetings! The San Jose INFORMS Annual meeting is coming up quickly (November 17-20). There are seven simulation sessions on Sunday and Monday, including five sponsored by the INFORMS College on Simulation and one co-sponsored by I-CS and the INFORMS Quality, Statistics and Reliability section. The I-CS reception and business meeting will be held on Sunday evening.

In keeping with the California theme, the Winter Simulation Conference will be held on Dec 8-11 in San Diego. As always, this is a wonderful venue for finding out the current state-of-the-art in simulation research and practice. The I-CS business meeting will be held on Tuesday evening, followed by a reception. Further information and links to the conference program and registration are available in this newsletter. I-CS will be distributing its three major awards (Lifetime Professional Achievement Award, Distinguished Service Award, and Outstanding Simulation Publication Award) at this meeting.

For the last two years, INFORMS has moved to a single national meeting during Fall, with a smaller, more focused practitioner-oriented meeting in Spring. This format will continue, so it is time for our community to consider other venues for getting together on a regular basis during Spring and Summer. One such opportunity is the upcoming 2003 EURO/INFORMS Joint International Meeting, to be held in Istanbul, Turkey July 6-10. Jack Kleijnen (Kleijnen@uvt.nl) and Russell Barton (rbarton@psu.edu) are putting together a simulation track with participants from Europe and the U.S., respectively. If you'd like to find out more about organizing or contributing a paper to a session, please contact Jack or Russell right away. At the business meetings during INFORMS and WSC, we will discuss other conferences where I-CS members might play a major role.

One item that has been on our agenda for several years is a discussion of converting I-CS from a Section of INFORMS to a Society. INFORMS considers Societies to be the "flagship" interest groups within INFORMS. We are currently in the process of preparing the paperwork so this will happen. Becoming a society will probably mean little to the internal workings of I-CS – we will remain the friendly community, with a mix of simulation academics and practitioners, that you've known for some time. However, it will give us greater visibility in the INFORMS community and a stronger voice in the restructured INFORMS Board. This may help broaden our membership to include more INFORMS members with simulation interests, and so increase our presence at future Fall INFORMS Annual Meetings.

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## Editor's Corner

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There's been a "changing of the guard" at the INFORMS College on Simulation. The officers have all moved up one slot, except for John Charnes who has wisely put himself out to pasture! I'll let Susan thank all of the bigwigs and confine my remarks to the newsletter team.

An immense THANK YOU is due to Steve Chick, who has resigned his post as newsletter editor, and is now the secretary. Steve did an awesome job as newsletter editor, including educating me on how things work. You're a hard act to follow Steve. I wish you'd screwed up just once or twice... Steve's departure has meant that a new space has opened up on the newsletter team, and it's my pleasure to welcome Mike Kuhl to the fray. Mike, you're probably not completely aware of what is coming your way, but *we've got you and it's too late now!* Actually, what I mean to say is welcome my friend. The third member of the newsletter team is Pete Welch, who continues to do a sterling job of converting the ramblings in this newsletter into readable web pages. Good on you Pete!

There are 3 new features in this newsletter. First, David Nicol has agreed to pass on editor reports for the ACM Transactions on Modeling and Computer Simulation journal. Thanks David! Second, there's a "simulation puzzle" in this issue. This might be handy for annoying students and/or colleagues. I hope you enjoy it. If you have another that you particularly enjoy, then please pass it on. Maybe we can make it a regular feature. Third, there are a few job listings here too. If you have a simulation-related position, academic or not, that you'd like advertised in the next newsletter (in May), then please pass it on. I hope you find something interesting/useful in here somewhere. If not, then please pass on suggestions for improvement!

Cheers! Shane Henderson – Newsletter Editor

Please pass along printouts of the newsletter to friends and colleagues, or let them know about the *INFORMS College on Simulation World Wide Web* page. You'll get more than just a newsletter. Its URL is

<http://www.informs-cs.org/>  
or <http://simulation.section.informs.org>

This web page is designed to be a general source of information and WWW links for the simulation community, with a particular focus on College interests and activities. There are often additional special items, such as WSC'02, and upcoming *INFORMS* conferences.



*INFORMS College on Simulation Newsletter* is published in the Spring and Fall of each year by the *INFORMS College on Simulation*. Membership in the *College on Simulation* is independent of membership in *The Institute for Operations Research and the Management Sciences*. The annual membership fee for non-*INFORMS* members is \$20.00; *INFORMS* members may join for \$10.00. The fee for students and retired members is \$5.00.

**To join**, send name, address, and e-mail address (if applicable), with the appropriate fee, to Steve Chick (his contact information is on the cover). Please make checks payable to *INFORMS College on Simulation*. Please pass along this announcement to others who might be interested in joining.  
POSTMASTER: Send address changes to *INFORMS College on Simulation Newsletter*, 901 Elkridge Landing Road, Suite 400, Linthicum, MD 21090.

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## INFORMS College on Simulation Treasurer's Report

Net Worth 31 August 2002	
<b>ASSETS</b>	
Cash and Bank Accounts	
INFORMS Account*	12,349.05
INFORMS-CS Checking	2,274.66
TOTAL Cash and Bank Assets	14,623.71
TOTAL ASSETS	14,623.71
<b>LIABILITIES</b>	
	0.00
NET WORTH	14,623.71

Headquarters Account funds are held by the *INFORMS* office: 901 Elkridge Landing Road; Suite 400; Linthicum MD 21090-2909. Checking account funds on deposit with Bank of America, 10 Light Street, Baltimore MD 21202 (checking account number 003936322008).

2002 Year-to-Date Cash Flow report  
31 August 2002

INFLOWS*	
Dues Income	4,145.00
WSC'01 Seed Return	2,000.00
Friends of LPAA	500.00
Donation for Student travel to WSC	250.00

Sales, IIE Special Issues	7.00
TOTAL INFLOWS	6,902.00
<b>OUTFLOWS (includes December '01)</b>	
'01 Best Publications	500.00
'01 LPAA	864.08
'01 CUMW Awards	600.00
'01 Ph.D. Colloquium	1,400.00
Web Page	1,800.00
WSC'01 Reception	998.05
Bank Charges/Software	36.00
Newsletter Mailing Expense	80.56
'00 Distinguished Service	1,507.32
WSC '02 Seed	2,000.00
WSC Board Meeting Expenses	306.93
TOTAL OUTFLOWS	10,092.94
NET CASH FLOW (estimate)	-3,070.94

\*Interest income from the account held at *INFORMS* headquarters is not calculated until the end of the calendar year. Interest income for 2001 was \$362.16. Dues income updates the estimate provided in the Spring Newsletter, and is based on figures from the *INFORMS* office as of 8/31/2002 plus handled through the local account.

*Respectfully submitted by Stephen E. Chick,  
Secretary/Treasurer, October 15, 2002.*

## Secretary's Corner

First, thanks are due to Russell Barton for his past service as Secretary/Treasurer, and best wishes to him in his new role as Vice President/President-Elect. Russell has simplified the transition into my new role as Secretary/Treasurer. In the past newsletter, Russell predicted a negative cash flow for the year, given recurring expenses and a lower-than expected attendance at WSC 01, which would imply little to no

WSC return money. As predicted, there has been no WSC return, which in the past has been up to \$3,000. That is comparable with the \$3,070.94 shortfall in cash flow during the past year. A discussion of revenues, expenses, and the services that the *INFORMS* College on Simulation can provide would be useful at the upcoming College meeting.

**Stephen E. Chick, Secretary**

## President's Message Continued from Page 1.

I'd like to give a special note of appreciation for John Charnes for his service over the years, most recently as President of I-CS. I am fortunate to be able to continue working with Russell Barton as VP/President-Elect, Steve Chick as Secretary/Treasurer, and Shane Henderson as the Newsletter Editor. And I'd like to welcome Mike Kuhl as the assistant newsletter editor. These are only a few of the many members of I-CS who have contributed their time and effort to help keep this a vibrant organization. I would like you to consider "one thing" (in addition to renewing your membership in I-CS!) that you could contribute during the upcoming year. Perhaps it's letting a friend or colleague know about I-CS. Invite them to the INFORMS Annual Meeting or Winter Simulation Conference, and bring them along to the business meeting and reception! (Don't forget to let them know about the registration discounts for I-CS members.) Perhaps it's arranging a session, panel discussion, or tutorial for a future conference...serving on the Membership committee, the Committee on

Underrepresented Minorities and Women. Perhaps it's cleaning out your bookcase and contributing letters or documents to the Simulation Archive project. Perhaps it's writing a column to the I-CS newsletter, or volunteering your expertise in web page design and management, or simply sending an e-mail letting us know one new thing you'd like I-CS to consider doing. If you're an academic, perhaps it's taking a few minutes of time from one of your classes to talk about joining I-CS as a leg up on professional activities. I first joined INFORMS as an undergraduate because one of my professors suggested this. I continue to be thankful for the people I have met because of my involvement, and way I-CS has worked over the years to foster the development of the simulation community.

I look forward to seeing you in California – either the INFORMS Annual Meeting in San Jose or the Winter Simulation Conference in San Diego!

Susan Sanchez, INFORMS-CS President

## INFORMS Annual Meeting November 17-20 San Jose



The INFORMS annual meeting will be held at the San Jose Convention Center and Fairmont Hotel, with most technical sessions, subdivision meetings and special events held at those locations. A small number of technical sessions will be held at the Hilton. The INFORMS College on Simulation business meeting will be held at 6.15pm on Sunday November 17<sup>th</sup>.

See the site

<http://www.informs.org/Conf/SanJose2002/> for full information.

Susan Sanchez has put together an impressive list of INFORMS College on Simulation sponsored sessions.

Sunday Nov 17, 08:00 - 09:30 : Industrial Applications of Operational Modeling and Simulation for Semiconductor Manufacturing. Chair: John W. Fowler

Sunday Nov 17, 10:00 - 11:30 : New Approaches to Operational Modeling and Simulation for Semiconductor Manufacturing. Chair: Michele Pfund

Sunday Nov 17, 13:30 - 15:00 : Panel Discussion: The Future of Operational Modeling and Simulation for Semiconductor Manufacturing. Chair: Michele Pfund.

Sunday Nov 17, 16:30 - 18:00 : Simulation Optimization. Chair: Michael Fu

Monday Nov 18, 08:00 - 09:30 : Panel Discussion - Agent-based Models: New Challenges for Military Simulations. Chair: Thomas M. Cioppa

Monday Nov 18, 10:00 - 11:30 : The Interface of Simulation and Statistics. Chair: Bahar Biller



## WSC'02: *Exploring New Frontiers*

2002 Winter Simulation Conference  
December 8-11, 2002  
Hyatt Regency Hotel  
San Diego, California USA

The 2002 Winter Simulation Conference will be held December 8th through December 11th at the [Hyatt](#)

[Regency Hotel](#) in [San Diego](#), California. WSC '02 offers the full featured conference you are accustomed to, including twenty one tracks and over 200 state-of-the-art presentations. You can access the program online at [www.wintersim.org](http://www.wintersim.org). The conference includes tracks for government and military applications as well as modeling and analysis methodology, manufacturing and logistics applications, and an extensive set of tutorials for both novice and experienced practitioners. WSC '02 has something of interest for everyone with its blend of cutting-edge research, innovative applications, and exhibits from top companies in the simulation industry.

Keynote speakers include Paul L. Graziani of Analytical Graphics, Inc. “Addressing the Challenges of Aerospace and Defense Initiatives Using Software Analysis Tools” and Dr. Kenneth Mark Bryden, Research Associate at Virtual Reality Applications Center and Assistant Professor of Mechanical Engineering, Iowa State University “Military-Based Virtual Systems Engineering”.

The [Hyatt Regency San Diego](#) has a prime waterfront setting on San Diego Bay located next to Seaport Village with nearby restaurants, entertainment and shopping. All guest rooms have waterfront views. The hotel is less than a 5 minute ride from San Diego International Airport and is easily accessible to the [San Diego Zoo](#), [Sea World](#), historic Old Town, [Balboa Park](#), [Legoland](#), the Gaslamp District, golf, tennis and beaches. You can make this a trip for a family vacation. For more information, see [www.wintersim.org](http://www.wintersim.org), contact General Chair: Jane L. Snowdon, IBM T. J. Watson Research Center, [wsc2002@us.ibm.com](mailto:wsc2002@us.ibm.com), or contact Program Chair: John M Charnes, University of Kansas, [jmc@ukans.edu](mailto:jmc@ukans.edu).

### Registration includes

- Admission to all WSC 02 Technical Program Sessions
- CD-ROM of the Proceedings
- Hard Copy of the Final Program containing abstracts of all Proceedings Entries
- Monday Opening Reception
- Admission to Exhibit Hall throughout the Conference
- Exhibit Hall Refreshment Breaks
- Admission to Sunday Vendor Tutorials and Tuesday User Groups
- Admission to Poster Session, PhD Colloquium and First-Time Attendee Orientation

### 2002 Winter Simulation Conference Fees are:

Early Registration on or before Friday, November 8, 2002	Standard Registration after Friday, November 8, 2002
\$395 Member of a sponsoring society	\$445 Member of a sponsoring society
\$545 Non-Member	\$595 Non-Member
\$135 Retired Member of a sponsoring society	\$135 Retired Member of a sponsoring society
\$100 Full-time student (with faculty certification)	\$100 Full-time student (with faculty certification)

For further registration details, including online registration, see <http://www.wintersim.org/registration.htm>.

## Book Announcement

### *Stochastic Petri Nets: Modelling, Stability, Simulation*

Springer Series in Operations Research

Peter J. Haas  
IBM Almaden Research Center  
San Jose, CA

Springer-Verlag, New York  
Hardbound, ISBN 0-387-95445-7  
509 pages, 71 Illustrations  
June, 2002  
\$69.95 US

The book can be purchased at Springer's web page:

<http://www.springer-ny.com/>

This book is about stochastic Petri nets (SPNs), which have proven to be a popular tool for modelling and performance analysis of complex discrete-event stochastic systems. The focus is on methods for modelling a system as an SPN with general firing times and for studying the long-run behavior of the resulting SPN model using computer simulation. Modelling techniques are illustrated in the context of computer, manufacturing, telecommunication, workflow, and transportation systems. The simulation discussion centers on the theory that underlies estimation procedures such as the regenerative method, the method of batch means, and spectral methods.

Tying these topics together are conditions on the building blocks of an SPN under which the net is stable over time and specified estimation procedures are valid. In addition, the book develops techniques for comparing the modelling power of different discrete-event formalisms. These techniques provide a means

for making principled choices between alternative modeling frameworks and also can be used to extend stability results and limit theorems from one framework to another.

As an overview of fundamental modelling, stability, convergence, and estimation issues for discrete-event systems, this book will be of interest to researchers and graduate students in Applied Mathematics, Operations Research, Computer Science, Applied Probability, and Statistics. This book also will be of interest to practitioners of Industrial, Computer, Transportation, and Electrical Engineering, because it provides an introduction to a powerful set of tools both for modelling and for simulation-based performance analysis.

Peter J. Haas is a member of the Research Staff at the IBM Almaden Research Center in San Jose, California. He also teaches Computer Simulation at Stanford University and is an Associate Editor (Simulation Area) for Operations Research.

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## Report on the Simulation Area of the *INFORMS Journal on Computing*

By Susan Sanchez, Area Editor, October 24, 2002

The Simulation Area is interested in research in all computational aspects of simulation. We are looking for high-quality research on the computational aspects of simulation model building, simulation data structures, simulation modeling and experiment environments, simulation stochastic input modeling, random-variate generation, output analysis, optimization, variance-reduction methods for simulation experiments over classes of problems possessing special structure, and other aspects of simulation experiment modeling and analysis. Tutorials and applications in the above areas that are comprehensive and integrate from multiple sources are also welcome. Please see the instructions for authors at <http://joc.pubs.informs.org> for more information and instructions to authors.

Two of the issues in 2002 have had special articles related to simulation. In Vol. 14 #1 a Research Perspective by David Goldsman, Seong-Hee Kim, William Marshall and Barry Nelson appeared. The same issue included a feature article by Michael Fu on Optimization for Simulation: Theory vs. Practice, with discussion by Sigrun Andradottir, Peter Glynn, and Jim Kelly.

During the last two quarters, there have been 2 acceptances, 2 rejections, 1 withdrawal, and 6 new submissions. There are currently 6 papers under review.

The Associate Editors are Paul Fishwick (University of Florida), Marvin Nakayama (New Jersey Institute of Technology), and Harriet Black Nembhard (University of Wisconsin-Madison).

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## Report on the Simulation Area for *Operations Research*

Respectfully submitted by Michael Fu, Area Editor, October 7, 2002

The Simulation Area of Operations Research seeks to publish papers that advance the methodology of stochastic simulation as applied to problems in operations research and management science. This is primarily the domain of discrete-event simulation, which can be used to model discrete-event dynamic systems such as queueing networks and production/inventory systems, but developments in Monte Carlo simulation may also be appropriate, especially in certain contexts such as financial engineering. For further information, see

[http://or.pubs.informs.org/Pages/edit\\_area.html#Simulation](http://or.pubs.informs.org/Pages/edit_area.html#Simulation)

Detailed submission information can be found on the Operations Research journal web page:

<http://or.pubs.informs.org/>

Activity in the Simulation Area of Operations Research (March 21, 2002 to October 7, 2002)

For the period specified, there were 5 new submissions and 5 resubmissions. For decisions on manuscripts made during the period, there were 2 rejections, 3 revise/resubmit recommendations, and 1 acceptance. Of the 6 decisions made during the period, 3 were late and 0 very late, where late and very late are defined as having spent over 3 and 6 months, respectively, with the Associate Editor.

The Associate Editors in the Simulation Area are Sigrun Andradottir, Peter Haas, Jian-Qiang Hu, Sheldon Jacobson, and Jack Kleijnen.

At present, there are 8 manuscripts under review, of which 3 are considered late and 0 are considered very late.

A note to prospective authors:

Please submit your manuscripts to me electronically ([mfu@rhsmith.umd.edu](mailto:mfu@rhsmith.umd.edu)), preferably in pdf format.

## Report on the Stochastic Models and Simulation Department for *Management Science*

*By Paul Glasserman, Departmental Editor, September 18, 2002*

The Stochastic Models and Simulation Department of Management Science seeks high-quality papers dealing with all aspects of stochastic models and simulation relevant to the practice or theory of management science. The department is particularly interested in papers dealing with new areas of application. The department's editorial objectives appeared in the September 1998 issue of the journal. Authors can submit their paper to the Departmental Editor either by electronic mail (as one self-contained TeX, LaTeX, pdf or postscript file, without encoding) or by regular mail (in four hardcopies).

Authors must adhere to the submission guidelines given in the journal, especially regarding the formatting and length of the papers.

From the date of our last report for this newsletter, March 13th, 2002, to date, there were 11 new submissions, of which 7 are still under review, 3 were rejected and 1 was withdrawn. Two papers have been accepted for publication.

Our Associate Editors for the Department continue to be:

Thanos Avramidis (Cornell University), Jim Dai (Georgia Tech), Michael Fu (University of Maryland), Perwez Shahabuddin (Columbia University), Jan van Mieghem (Northwestern University), Garrett van Ryzin (Columbia University), Tava Lennon Olsen (University of Washington), Stefanos Zenios (Stanford University), Felisa Vazquez-Abad from the University of Montreal and Steve Chick (INSEAD).

*Marina Tourevskij, for*

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## Report on ACM Transactions on Modeling and Computer Simulation

*By David Nicol, Editor in Chief, October 30, 2002*

ACM TOMACS publishes high quality papers on methodology for all aspects of discrete-event simulation, combined discrete and continuous simulation, as well as Monte Carlo methods. It publishes quarterly, each issue containing 3 to 6 papers. The acceptance rate is approximately 25%, the average time to decision is 10 months.

Approximately half the issues are focused on particular topic areas. Issues in progress presently include one on Simulation Optimization (guest editors Michael Fu and

Barry Nelson), Computer Automated Multi-Paradigm Modeling (guest editors Pieter J. Mosterman and Hans Vangheluwe), Random Number Generation and Highly Uniform Point Sets (guest editor Pierre L'Ecuyer).

See [www.cs.dartmouth.edu/~tomacs](http://www.cs.dartmouth.edu/~tomacs) for more information on TOMACS, and to submit a paper. Contact Professor Nicol ([nicol@cs.dartmouth.edu](mailto:nicol@cs.dartmouth.edu)) with ideas for focused issues.

## INFORMS Employment Service

INFORMS has some employment services on the www site <http://www.informs.org/employment.html>.

### Job Openings in Simulation

*Naval Postgraduate School, Operations Research Department, Tenure-Track Faculty Position in Simulation*

Full announcement:

<http://www.nps.navy.mil/or/employ/Job%20Listing.htm>

The Operations Research Department of the Naval Postgraduate School seeks a well-qualified candidate for a tenure-track appointment in simulation modeling and/or analysis, at any rank commensurate with experience and academic achievements.

Further information about the OR Department and NPS can be found on the department's Web page:

<http://www.nps.navy.mil/or/>

Applicants should provide an application letter, including a statement of research interests and accomplishments, and a curriculum vitae to Dr. Susan Sanchez at [ssanchez@nps.navy.mil](mailto:ssanchez@nps.navy.mil) or by regular mail to Faculty Recruiting Committee, Operations Research Department, Naval Postgraduate School, Monterey, CA 93943. After an initial screening, promising candidates will be asked to have letters of reference forwarded. Applications received by 31 December, 2002, will receive priority. Appointment can commence at any time. The Naval Postgraduate School is an Equal Opportunity Employer. U.S. citizenship is required for award of tenure.

Applicants seeking positions at the Assistant Professor level will have priority. Applications in other areas of Operations Research will also be considered. A background combining Operations Research and other research expertise in Computer Science (eg telecommunications, bioinformatics, machine learning, artificial intelligence, vision) is an asset. Beyond demonstrating a clear potential for outstanding research, the successful candidate must be committed to excellence in teaching. The candidate is expected to have a working knowledge of French, and be prepared to teach and supervise students in French within one year.

Hardcopy applications including a curriculum vitae, a description of the candidate's current research program, at least three letters of reference, and up to three selected preprints/reprints, should be sent to:

Pierre McKenzie, professeur et directeur  
Département d'informatique et de recherche  
opérationnelle, FAS  
Université de Montréal  
C.P. 6128, Succ. Centre-Ville  
Montréal (Québec) Canada H3C 3J7

by February 1st, 2003. Applications received after that date may be considered until the position is filled.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents. The Université de Montréal is committed to equity in employment and encourages applications from qualified women.

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*Université de Montréal, Faculté des arts et des sciences, Department of Computer Science and Operations Research. Tenure track position in Stochastic Modelling and Optimization.*

Full announcement: <http://www.iro.umontreal.ca/>

The DIRO (Département d'informatique et de recherche opérationnelle - Department of Computer Science and Operations Research) invites applications for a tenure-track position in the area of Stochastic Modelling and Optimization, starting June 1st, 2003.

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*State University of New York- Stony Brook, Applied Mathematics and Statistics Dept. Tenure track position in applied statistics or stochastic operations research.*

Full announcement: <http://www.ams.sunysb.edu/hire.html>

The department anticipates an opening for a tenure track assistant professorship. Demonstrated strength in applications and/or methodology is essential. The department has a large research program (\$3.5M annually), outstanding computing facilities, and

numerous opportunities for collaborative research on/off campus. Send CV, 3 references and a research plan to J. Glimm, Chair, Applied Mathematics & Statistics, SUNY, Stony Brook, NY 11794-3600.

SUNY-Stony Brook is an affirmative action/equal opportunity employer.

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*The University of North Carolina at Chapel Hill, College of Arts and Sciences, Department of Operations Research. Tenure track position.*

The Department of Operations Research at University of North Carolina at Chapel Hill invites applications for a tenure-track position at the assistant professor level starting July 1, 2003.

The candidate should have a doctorate in Operations Research or a closely related area, with emphasis on stochastic models. The candidate will be expected to develop a first rate research career in stochastic models and/or simulation, and teach courses at the undergraduate and graduate levels in introductory Operations Research, stochastic models and discrete-event simulation. Evidence of potential for application-oriented and interdisciplinary research is desirable.

The application deadline is January 15, 2003. Applicants should send a curriculum vita and four letters of reference to:

Search Committee

Department of Operations Research  
 CB #3180, Smith Building  
 University of North Carolina  
 Chapel Hill, NC 27599-3180  
 Email: bmeadows@email.unc.edu  
 Telephone: 919-962-8401  
 http://www.or.unc.edu

The University of North Carolina at Chapel Hill is an EEO/ADA employer, and encourages applications from women and members of ethnic minorities.

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*Purdue University, School of Industrial Engineering*

Nominations and applications for three tenure-track positions are invited. Applications in all areas of Industrial Engineering, including the following areas, will be considered.

- Manufacturing Processes and Systems
- Optimization, Simulation, and/or Stochastic Systems

- Global Infrastructures
- Production Systems and/or Logistics
- Human Factors

The successful candidate in the global infrastructures area will be expected to assume leadership of an existing major research center that is currently funded by the state and is focused on state-regulated electricity infrastructure planning and development. Successful candidates will be required to have, prior to the appointment date, a Ph.D. in Industrial Engineering or a closely related area of science or engineering.

Applications will be reviewed immediately upon receipt and the search will continue until the positions are filled. An applicant should send a statement of research and teaching interests, a curriculum vita and representative research paper(s) electronically to [iesearch@ecn.purdue.edu](mailto:iesearch@ecn.purdue.edu) and arrange to have hardcopies of three letters of recommendation sent to:

Judi Chester  
 IE Faculty Search Committee  
 Purdue University  
 School of Industrial Engineering  
 Grissom Hall, Room 228  
 315 N. Grant Street  
 West Lafayette, IN 47907-2023 USA

Applicants are encouraged to submit the electronic documents in PDF format. All correspondence regarding the search should be sent to the aforementioned mail and e-mail addresses.

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## That Annoying Puzzle

- Shane Henderson

If there's one puzzle that's been overdone it's the Monty Hall game show "3 doors" puzzle. Just search on the web and you'll find it in a million places. So who am I to buck tradition? In this article, I'll just mention a couple of things related to this puzzle, including a variation that you can use to test whether you really understand the solution.

I think it (or something similar) is a great teaching tool. I use it to reinforce random variables, output analysis, the concept of acceptance/rejection and a bunch of other stuff. If you're already familiar with the puzzle, then skip the next paragraph.

There are 3 doors, one of which has a prize worth a zillion dollars hiding behind it. You pick one of the 3 doors and tell the world of your choice. Your game show host knows where the prize is and opens a door, different from your choice, that does *not* hide the prize. The host then gives you the option of switching doors. Should you switch? Or not? Or doesn't it make any difference?

No matter how many times I explain the answer to a group of students, there's always a few who have this glazed "what?" look on their faces, but to avoid

embarrassment say "yeah, ..., I get it". So I assign the problem as a homework question. I get them to simulate the problem (a plain old spreadsheet can do the trick – do one replication of the puzzle in each row and fill down to get multiple replications). Students quickly figure out the answer when forced to implement the thing!

The answer? Well, the answer doesn't really give anything away, since the challenge lies in *understanding* the answer. So I'll mention it here. The answer is to switch. See below if you're confused and interested. Or better yet, simulate the thing.

The following is an interesting variant that really tests whether you understand this puzzle or not. In this variant, the game show host *doesn't* know where the puzzle is. The host picks any other door. If the prize is revealed, then all bets are off, and you restart the game with the puzzle hidden again. You keep going until the door that the host opens has no prize. Again you have the option of switching doors. Should you? Or not? Or doesn't it make any difference? I'll leave the answer to the bottom part of this page.

## The Solutions

If you switch, then there's a  $2/3$  probability that you win. Why? If you don't switch, then you win if and only if the prize is behind your originally picked door, so you win with probability  $1/3$ . If you switch, then you win when the prize is behind either of the doors that you did not pick. So switching gives a winning probability of  $2/3$ . Unsatisfied with this answer? Then simulate the puzzle, either on a computer or in your head!

For the variant, you may notice that this is just a particular case of the acceptance/rejection concept. Think about your chance of winning if you "stick" to your door choice. The probability that the prize is behind the door that you pick has to be conditioned on the event that the game show host did not open a door containing the prize, since otherwise you would have restarted the game. This makes the probability of winning when you stick equal to  $1/2$ . So it makes no difference!

# Event Calendar

By Michael Kuhl, Associate Newsletter Editor, October 16, 2002

IASTED International Conference on Modelling and Simulation, Palm Springs, California, Feb 24-26, 2003. WWW: <http://www.iasted.com/conferences/2003/palm/ms.htm>

Simulation Solutions 2003, Las Vegas, Nevada, March 31 - April 2, 2003. Email: [simsol@iienet.org](mailto:simsol@iienet.org). WWW: <http://www.simsol.org>

2003 Advanced Simulation Technology Conference, Orlando, Florida, March 30 - April 3, 2003. Contact: Jeffrey W. Wallace. Email: [jeffrey.w.wallace@worldnet.att.net](mailto:jeffrey.w.wallace@worldnet.att.net). WWW: <http://www.scs.org/confernc/astc/astc03/cfp/astc03.htm>

Military, Government and Aerospace Simulation Symposium (part of ASTC 2002), Orlando, Florida, March 30 - April 3, 2003. Contact: Michael J. Chinni [mchinni@pica.army.mil](mailto:mchinni@pica.army.mil). WWW: <http://www.scs.org/confernc/astc/astc03/cfp/astc03.htm>

35th Annual Simulation Symposium (part of ASTC 2002), Orlando, Florida, March 30 - April 3, 2003. Contact: Prof. Taieb Znati (412) 624-8417 [znati@cs.pitt.edu](mailto:znati@cs.pitt.edu). WWW: <http://www.scs.org/confernc/astc/astc03/cfp/anss03.htm>

Agent-Based Simulation 4, Montpellier, France, April 28-30, 2003. Contact: Rainer Rimane, +49 (0)9131 - 8527 896 Email: [rimane@cs.fau.de](mailto:rimane@cs.fau.de) WWW: [http://abs2003.cirad.fr/index\\_an.html](http://abs2003.cirad.fr/index_an.html)

SimTecT 2002, Adelaide, Australia, May 26-29, 2003. Contact: Conference secretariat +61 2 6251 0675 [simtect@consec.com.au](mailto:simtect@consec.com.au) WWW: <http://www.siaa.asn.au/simtect/2003/2003.htm>

INFORMS Conference on OR/MS Practice, Phoenix, Arizona, May 4-6, 2003. Contact: [meetings@informs.org](mailto:meetings@informs.org) 1-800 343-0062 or 401 274-2525. WWW: <http://www.informs.org/>

IIE Annual Conference, Portland, Oregon May 18-21, 2003. Contact: Katherine Kinser [kkinser@iienet.org](mailto:kkinser@iienet.org) WWW: <http://www.iienet.org/annual/>

Canadian Operational Research Society, Vancouver, Canada, June 1-4, 2003. WWW: <http://www.cors.ca/meetings/confer.htm>

17th Workshop on Parallel and Distributed Simulation, San Diego, California., June 10-13, 2003. Contact: George F. Riley Email: [riley@ece.gatech.edu](mailto:riley@ece.gatech.edu) or Philip Wilsey [philip.wilsey@ieee.org](mailto:philip.wilsey@ieee.org). WWW: <http://www.pads-workshop.org/>

17th European Simulation Multiconference, Nottingham, United Kingdom, June 2003. WWW: <http://biomath.rug.ac.be/~scs/conf/index.html#present>

ACM SIGMETRICS 2003 San Diego, California, June 10-14, 2003. Contact: Satish Tripathi [tripathi@engr.ucr.edu](mailto:tripathi@engr.ucr.edu). WWW: <http://www.crhc.uiuc.edu/sigm2003/>

European Simulation Interoperability Workshop, Stockholm, Sweden, June 16-19, 2003. WWW: <http://www.sisostds.org/conference/index.cfm?conf=03euro>

First Joint Meeting of CAIMS and SIAM 24th Annual Meeting of CAIMS/SCMAI 2003 Montreal, Quebec, Canada, June 16-20, 2003. Contact: [meetings@siam.org](mailto:meetings@siam.org). WWW: <http://www.siam.org/meetings/an03/index.htm>

International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS '03), Montreal, Canada, July 20-24, 2003. Contact Mohammad S. Obaidat 732-571-4482 [obaidat@monmouth.edu](mailto:obaidat@monmouth.edu) WWW: <http://scs.org/confernc/ssimc/ssimc03/cfp/spects03.htm>

Operations Research 2003, University of Heidelberg, Germany, September 2 - 5, 2003. Contact: [or2003@uni-heidelberg.de](mailto:or2003@uni-heidelberg.de) WWW: <http://www.gor-online.org/tmp/index.html>

INFORMS Annual Meeting, Atlanta, Georgia, October 19-24, 2003. Contact: [meetings@informs.org](mailto:meetings@informs.org) 1-800 343-0062 or 401 274-2525. WWW: <http://www.isye.gatech.edu/informs2003/>

WSC 2003: Winter Simulation Conference, New Orleans, Louisiana, December 7-10, 2003. WWW: <http://www.wintersim.org>

Fifth St. Petersburg Workshop on Simulation, St. Petersburg, Russia, June 2005. Contact: Prof. Viatcheslav B. Melas. Email: [v.melas@pobox.spbu.ru](mailto:v.melas@pobox.spbu.ru). WWW: <http://vega.math.spbu.ru/workshop/2001/>



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