ORSP sponsors ICORMS-ICORD 1997

The joint Second International Conference on Operations Research/Management Science and Third International Conference on Operations Research in Development (ICORMS-ICORD) was successfully held last November 25-28 at the EDSA Plaza Hotel in Mandaluyong City, Philippines. The event which focused on the theme "OR/MS in Development" was organized and hosted by the OR Society of the Philippines (ORSP) and co-sponsored by IFORS.

Sessions and Speakers

Seven plenary sessions were held over four days :

- *Dr. Peter Bell*, IFORS President, and *Dr. Christoph Haehling von Lanzenauer* led an interactive lecture on "Teaching OR/MS", introducing the case approach as an effective tool in teaching the subject. Based on their long experience with the method, the two professors gave guidelines and a host of examples on selecting and building up classroom discussions of OR/MS cases.

- *Dr. Haehling von Lanzenauer* gave an insightful follow-up to the previous session with a step-by-step demonstration of how a case is tackled, utilizing a popular OR/MS case as example. An actual DSS was used to illustrate the approach and case resolution.

- A highlight of the conference was a panel discussion on the "The State of OR" which, in line with IFORS's efforts to advance OR theory and practice worldwide, sought to understand issues affecting OR/MS. Representatives of ten OR Societies from developing and developed countries presented recent developments, problems, and the extent of OR use in their respective countries. The ten panelists were ·

Croatia	*Dr. Luka Neralic*
Germany	*Dr. C. Haehling von Lanzenauer*
India	*Dr. Arabinda Tripathy*
Israel	*Dr. Adir Pridor*
Japan	*Prof. Toshiharu Hasegawa*
Korea	*Prof. Park Sung Joo*
Malaysia	*Hoo Ching Dew*
Mexico	*Dr. Ricardo Aceves Garcia*
Philippines	*Dr. Elvira Zamora*
United Kingdom	*Dr. Arjan Shahani*

In This Issue:

ORSP sponsors *From Page 1*

The session was chaired by *Elise del Rosario*, IFORS Coordinator for Developing Countries and Conference Organizing Committee head.

- *Dr. Paul Bender*'s session on "Supply Chain Management for Development" emphasized the rapid changes in technologies affecting corporate decisions, notably on distribution. It presented major advantages of correctly modeling and implementing a global supply chain.

- *Dr. R. Bandyopadhyay* lectured on "Applications of OR in Area Planning and Micro Management of Developing Economies". The presentation reviewed the applications and techniques orientation that OR has followed in developing countries since World War II and argued that little of OR's potential has been used to address critical social problems. It concluded with proposed guidelines to make OR an effective instrument in sustainable development.

- *Dr. Yong Tao* talked on "Risk Analysis and Fairness in Bank Restructuring". The lecture was particularly relevant in the light of the present Asian currency crisis and bank difficulties in dealing with distressed assets. It presented how a rigorous risk analysis explicitly captures risks surrounding distressed assets and recommends fair asset disposal. Dr. Tao has successfully applied the approach in various consulting work around the world.

A segment of Day 3 was allotted to tutorials on optimization and leading software packages. Parallel lecture-demonstrations were conducted by *Dr. Robert Daniel* on "XPRESS-MP", *Lo Chap Sing* on "OR Tools in SAS", and *Dr. Alexander Hipolito* on "Spreadsheet Modeling and Optimization".

Concluding sessions of Days 1 to 3 were devoted to paper presentations on quantitative techniques and applications in various sectors. Thirty-nine papers on Manufacturing / Production / Facilities Location Concepts and Techniques, Applications in IT and the Public Sector, Multi-Objective Programming and Econometrics, Statistics / Probability / Queueing, and Applications in the Service Industry were presented by foreign and Filipino experts.

Participation

One hundred and twenty participants from 16 countries attended the four-day conference, including 79 local and 41 foreign delegates. The local turnout was high in the light of untimely cost-cutting measures taken by companies and organizations affected by the currency crisis. Many of the paper sessions were particularly interesting as participants engaged some presentors in lively discussions.

Special Events

Welcome cocktails were served at the head office of San Miguel Corporation, across the street from the conference venue. San Miguel was one of the conference's corporate sponsors. A grand banquet on Day 3 featured a well-applauded Filipiniana cultural show. The evening was capped by ballroom dancing. The afternoon of the fourth and final day gave foreign delegates a tour of Metro Manila for a first-hand view of its tourist attractions and bustling business centers, and a taste of its dreaded traffic.

Student Federation holds the Third Student Congress

The 3rd National Student Convention of the National Student Federation Chapter of ORSP was held at De La Salle University, Manila last January 29, 1998. Participants included students from Adamson University, De La Salle University, Mapua Institute of Technology, and University of Santo Tomas.

The convention featured simultaneous discussions by five speakers:

- *Dr. Noli Macalalag* talked about the difference of OR in the Academe and the Industry.
- *Dr. Cleta Milagros Acebedo-Filmer* discussed the application of simulation in TQM.
- *Mr. Aldo Sanico* demonstrated the use of spreadsheets in solving OR problems.
- *Ms. Joanne Yu* discussed the applications of OR in SMC.
- *Mr. Dennis Beng Hui* conducted the Beer Game to illustrate the concept of system dynamics.

DLSU wins Eighth OR Quiz Contest

The 8th OR Quiz contest sponsored annually by the ORSP was held last February 7, 1998 at the Waldo Perfecto Hall, De La Salle University-Manila. The event was participated in by Ateneo de Manila, De La Salle University, Mapua Institute of Technology, University of Santo Tomas, and University of the Philippines-Diliman.

The championship was won by DLSU, while ADMU, and MIT placed second and third, respectively. The quizmasters of the contest were Dr. Noli Macalalag and Ms. Mona Castillo. The board of judges was made up of representatives from the participating schools. They were Mr. Raul Rodriguez (ADMU), Mr. Juanito Chan (MIT), Ms. Marlene Gutierrez (UP), Ms. Theresa Libiran (UST), and the Chair of the Board of Judges, Dr. Cleta Milagros Acebedo-Filmer (DLSU). •

Student Paper Writing Contest Relaunched

The ORSP is inviting all students to participate in the 6th OR Student Paper Writing Contest. The contest aims to encourage students to apply operations research in the fields of manufacturing or service environment. It is also aims to identify and reward creative works by students where operations research was applied. Three finalists will be chosen on May 18,1998 and they will be given the opportunity to present their papers on May 30,1998 during the National Congress of ORSP. The winner will be chosen and awarded on the same day. For interested participants, you may submit your entries to Mr. Sam Cruz or Dr. Noli Macalalag of the Operations Research Department, San Miguel Corporation, 40 San Miguel Avenue, Mandaluyong, Metro Manila on or before April 27, 1998. For inquiries, contact Mr. Dennis Beng Hui at 536-0257 / 524-4611 local 220 or email at coedtbh@coelan.dlsu.edu.ph. •

President's Corner

The past year has been very eventful for the Operations Research Society of the Philippines. Bound together by a common interest in Operations Research (OR) and its various applications, practitioners, specialists and enthusiasts have engaged in various activities to promote OR practice and teaching. It my honor and pleasure to report to you the successful activities that have transpired this past year.

The Induction Ceremonies of the incoming Officers and Directors of the ORSP Board were held at Ciudad Fernandina in Greenhills,Q.C. last January 14, 1997 with Sen. Gloria Macapagal-Arroyo gracing the occasion as the inducting officer and Keynote Speaker. In her speech, she spoke of the many possible applications of OR in government. Currently vying for the Vice-Presidency, the society appears to be a significant forum for future top leaders of the country. It can be recalled that President Fidel V. Ramos was once an inducting officer and guest speaker of the ORSP Board in 1988 when he was still Secretary of Defense.

1997 also marked the 10th Anniversary of the ORSP. A simple dinner celebration was held last August 14, 1997 at the Lubang Room of Shangri-La's EDSA Plaza Hotel to honor the society's founding members and student member achievements. A fitting climax to the affair was a nostalgic video presentation of ORSP highlights over the past 10 years impressively produced by the student chapter of De La Salle University.

From its humble beginnings in February 20, 1987, membership has grown from an initial batch of some 50 members to over 150 members composed of both practitioners in industry and the academe. Six student chapters from reputable universities have been affiliated with the addition of the University of the Philippines just this past year bringing the total student membership to over 1000. These student chapters form the members of the Federation of ORSP Student Chapters.

President's Corner *From Page 3*

The Society, in a joint effort with the National Engineering Center (NEC), has sponsored the second offering of the seminar on "Quantitative and Computer-based Techniques in Manufacturing and Distribution" last January 19-21, 1997 at the National Engineering Center in U.P. Diliman. This 3-day course was attended by managers, analysts and faculty from various companies and universities. This activity was part of the Continuing Engineering Education Series of the NEC. Resource persons for this seminar were tapped from ORSP members.

A joint activity of the ORSP and the Federation of ORSP Student Chapters, the Student Congress on OR/MS took place for the second time last March 8, 1997 at the Adamson University. It was participated by approximately 230 students coming from the various student chapters. Early this year, an equally successful Student Symposium was held at the De La Salle University last January 31, 1998. In both occasions, students were treated to seminars on various OR topics with software demonstrations to illustrate their usefulness in various applications.

Since 1991, the ORSP has sponsored the Inter-University OR Quiz annually. It has been participated in by the best students from different universities. The 7th OR Quiz was hosted by Adamson University last March 8, 1997 where Ateneo de Manila bagged its fourth OR Quiz title while the University of the Philippines and Mapua Institute of Technology in second place and third place, respectively. Just very recently, De La Salle University became host to the 8th OR Quiz last February 7, 1998. De La Salle University won 1st place, Ateneo de Manila in second place and Mapua Institute of Technology in third place.

ORSP is also proud to have reaped international recognition through the years. As a member of the International Federation of Operational Research Societies or IFORS, the Society has participated in various international activities through its IFORS representative, Ms. Elise del Rosario of San Miguel Corporation, and its other members. Last year, ORSP has embarked in sponsoring an international forum of experts and practitioners here in the Philippines. The 2nd International Conference on Operations Research and Management Science

(ICORMS) conducted jointly with the IFORS' annual International Conference on OR in Development (ICORD) was held in the Isla Ballrooms of Shangri-La's EDSA Plaza Hotel in Nov. 25-28, 1997. Twenty-nine (29) papers from twelve (12) countries were presented. The conference also highlighted a teachers' workshop led by no less than IFORS President Peter Bell and a Panel Discussion on the State of OR by international discussants from four different countries. The conference was attended by more than 100 delegates from 16 countries. Indeed, it was a fitting event to boost the ORSP into its next decade.

In realization that the society has grown in size both in terms of membership and activities, the Board has engaged the services of Ms. Cherrie Platon of Leading Edge Consultancy Services to help professionalize the management of the ORSP Secretariat. It is perceived that with her able assistance, ORSP can provide better service and more effectively reach our general membership.

As I approach the close of my term as ORSP President, I would like to thank our Officers and Directors of the Board, members, faculty and students who gave their time and support in implementing all our ambitious projects. It was a challenging experience to follow the paths of the ORSP Presidents of the past 10 years and to forge new paths to attain our mission. Thank you for the opportunity to serve.•

ICORMS-ICORD
1997
HIGHLIGHTS

IFORS'99 Conference:

OR-Parallel Roads to Prosperity in the 21st Century

The 1999 conference of the International Federation of Operational Research Societies (IFORS) will be held in Beijing, P.R. China. Beijing is a historical city which is quickly developing into a modern metropolitan city, and its well known for its gems of ancient Eastern civilization and its colorful modern activities. The Great Wall, the Forbidden City, the Temple of Heaven, and the Summer Palace are some of the many sights for you to see during the conference.

Conference Venue and Date
The conference will be held on August 16-20, 1999 at the Friendship Hotel, one of the largest garden-style hotels in Asia.

Invited Papers
Papers will be invited from prominent researchers and practitioners by session organizers. In addition, the national and kindred member societies of IFORS are invited to present National Contributions.

Contributed Papers
Authors wishing to contribute papers are requested to submit an abstract of not more than 50 words electronically by WWW or e-mail or by fax or normal mail.

Publications
Abstracts of all papers to be presented to the conference will be published in advance of the conference. Several issues of *International Transactions in operational Research (ITOR)* Volume 7, have been reserved for publication of papers presented to the conference. Professor Theo Stewart will serve as Guest Editor and arrange reviewing for all submitted articles. Authors are encouraged to prepare full papers for submission to this journal. The deadline for submission is May 31,1999. A subscription for Volume 7 of *ITOR* in six issues will be provided to each conference registrant as part of the registration package.

Software and Book Exhibition
Commercial exhibitions are welcome to display books, journal and computer software related to OR. Potential exhibitors should contact the local organizing committee.

Further Information
The Invitation Program will be mailed during the winter of 1998/99 to all who sent an Abstract Submission to the IFORS Secretariat, or sent a request for information to the IFORS'99 Conference Secretariat. The Invitation Program will contain information about plenary speakers, invited sessions as well as tutorials and scientific activities. The Invitation Program will also contain information about accommodation, cost of living, pre and post-conference tours and social activities.

Useful Information
All participants should register electronically or by using the Registration Form included in the Invitation Program. Responding to this call for papers with an abstract does not constitute registration for the conference.

Spouses' program: various activities, such as sightseeing, shopping trips etc., will be arranged during the conference for accompanying persons.

Pre- and Post-Conference Tours: assistance will be provided in arranging visits to other cities of China, before and after the conference.

More of ICORMS-ICORD 1997 ...

IFORS'99 Conference From Page 6

OR in Development Prize

Our IFORS Representative, Elise del Rosario, wishes to announce that entries to the IFORS Prize for OR in Development" are now being accepted. She stresses that so far, no Filipinos have yet entered this competition which offers US$2000 for the first place, US$1000 for the runner-up and plaques for the finalists. Finalists will present before an international panel of judges during the 1999 IFORS Conference in Beijing. For those interested, rules of the competition are as follows:"

1. Papers should describe a practical application of OR in a developing country, which was conducted for a specific organization, in which the intention on both sides was to assist the decision-making process.

2. Principal authors and presenter should be nationals of a developing country.

3. Papers should be publishable in *ITOR* with at most minor revisions and should describe an application of OR which has original features, whether in methodology, application, or implementation.

4. Papers should include some description of the social context of the application, and the impact of the work on the decision-making process or on the organization in which the work took place. Where appropriate, the relevance of a country's state of development to the conduct of the study should be addressed. An emphasis on development issues will be a positive factor.

5. Papers must be submitted by December 31, 1998 directly to the Prize Coordinator:

> Dr. Elise del Rosario
> San Miguel Corporation -OR Dept.
> San Miguel Avenue, 40
> Mandaluyong, Metro Manila
> 1501 Philippines
> Fax: (632) 632957
> E-mail: elisear@sanmiguel.com.ph

The Organizing Committee has received a donation of about 2 million Japanese Yen from Operations Research Society of Japan (ORSJ) to support the prize finalists by covering their registration fee and part of their travel expenses. This support is based on the project of ORSJ: The 40th Anniversary of ORSJ, International Cooperative program for the Promotion of Operations Research (sponsored by Daiwa House Industry Co., Ltd.).

Abstract Submission Instructions

Abstract of all papers (both invited and contributed) should be submitted to the IFORS Secretariat:

> Ms. Loretta Peregrina
> IFORS Secretariat
> Richard Ivey School of Business
> University of Western Ontario
> London, Canada N6A 3K7
> Voice: +1 519 661 4220
> Fax:+1 519 661 3485
> E-mail: IFORS@Ivey.uwo.ca

The abstracts should be in English, and should not include any mathematical notation. Each submission must contain all the following:

1. Paper title.
2. Abstract (maximum 50 words).
3. Author(s) name(s), organization, and full mailing address, with the indication of the presenter.
4. An indication of the topic numbers (at most three) chosen from the Conference Topics List (see WWW) or suggestions for additional topics.
5. Abstract fee; An abstract fee of U$100.00 is required for all papers, both invited and contributed, (including National Contributions) and can be paid by either e-mail or ordinary mail. Payment may be made by Visa credit card, or by check payable to "IFORS". The abstract fee, which is non-refundable after December 31,1998 will be credited towards the presenter's registration fee.

Feature Article:

An Issue Of Mathematics
by Wilson Wy Tiu

(This article appeared in the Reality Check column of "The Business Daily" newspaper, Thursday, 26 February 1998, page 4.)

There is an interesting story of 23 years ago. A young analyst brought to the attention of the late Andres Soriano, Jr. that beer sales appeared perfectly correlated to copra prices. The analyst proposed a full study on copra prices aimed at forecasting demands for beer in coconut producing regions. The response of Mr. Andy can be humorous, "if we can predict copra prices, let us close down beer operation and go into copra trading. We then make more money and our stockholders very much happier."

Mathematics is a strange animal. I still recall as an operations research analyst trying to forecast rainfalls in Tagum, Davao for the yellow-corn project of San Miguel Corp. Our consultant simply asked, "Wilson, are you crazy?" I did not show him the beautiful computerized models I developed or thousands of computer cards on rainfall data. Of course my manager was also crazy for approving the project, and the Agribusiness people for requesting it in the first place.

Back then in mid-70's, the San Miguel Operations Research (SMCOR) group was regarded as elite of the elite. All their studies were made with the aid of computers. The group was proud for forecasting beer sales with a statistical 98% accuracy on the national level, and an average of 86% for provinces. Final site selection of the northern Luzon beer plant was result of complex mathematical models on production, marketing, political and other cost considerations. The shift to plastic crates for softdrink and beer bottles was made after extensive works in the more complicated Visayas markets. Other divisions, such as packaging, feeds, poultry, etc., greatly benefited from the many studies. Naturally, there were failures, but SMCOR was the shock trouper of top management.

Operations research (O/R) is a relatively new discipline credited by many theoretically to George Dantzig for his simplex algorithm, a form of linear programming. But it was The Rand Corporation that made practical use in the field during second world war. With no benefit of time or laboratorical controls, complex mathematical models were build to simulate real life and generate alternative solutions in its imperfect environment. O/R was used to estimate locations of enemy-planted landmines and save a few lives in the Allied Forces, some of them Filipinos and perhaps your grandparents.

O/R is an attempt to optimize resource utilization based on set objectives within some delimiters or constraints. There are many modern concepts that came out of O/R works, such as the S-curve on skills proficiency and extrapolations of marketplace behaviors. Certain scientific breakthroughs resulted from applying O/R technologies, while new developments in the medical field are based on principles discovered. Thrusts into space and telecommunication are likewise related. Impacts of O/R are normally high. Land around the northern Luzon beer plant shot up upon announcement of decision. Plastic crates for softdrinks made the wooden segment history.

Due to vast amount of mathematical computations required, O/R heavily relies on the number-crunching capability of computers and boring to those who decides based purely on gut feel. But the two are not incompatible, as decision makers get more and more use to the powerful spreadsheets that come with the personal computers. Today, it is almost sacrilegious for a larger company executive not to have a desktop or laptop computer on his table linked to a network system. Yet O/R work is much more than computerized word processing or viewing of large databases on sales and productions. It should make empirically-generated numbers useful for deciding future courses of actions. Practically all major global companies utilize O/R techniques to attain competitiveness in the open markets. The delphi method is used extensively to predict behaviors of diversed human societies with disorganized interests and tastes. From agriculture crops to cars, producers for the world

IFORS'99 Conference From Page 8

Electronic Submission

The deadline for the electronic submission of abstracts is December 31,1998.

1. WWW submission: follow the instructions in the conference URL:
   http://www.IFORS.org/leaflet/triennial.html

2. E-mail submission: send an e-mail containing all items 1-5 to the IFORS Secretariat: IFORS@Ivey.uwo.ca. An abstract submission form may be automatically obtained by sending an e-mail message to the above address, specifying in the subject: HELP ABSTRACT.

Mail/Fax Submission

The deadline for the mail/fax submission of abstracts is November 30,1998. The submission should be typewritten, must contain items 1-5, and should be sent to the IFORS Secretariat.

Notification of Acceptance

The date for notification of acceptance is February 15,1999.

Important Dates

Nov. 20, 1998	Deadline for mail/fax abstract submission.
Dec. 31,1998	Deadline for electronic abstract submission and paper submission to OR in Development Prize
Feb. 15, 1999	Notification of acceptance
April 1, 1999	Deadline for early registrant
May 31, 1999	Deadline for submission of full papers in ITOR

ICORMS-ICORD 1997
Financial Statement

Revenue:		820,973.95
Solicitations:		
PNOC	100,000.00	
IFORS ($2000.00)	63,624.30	
Shell	60,000.00	
M-Stone	30,000.00	
Petron	20,000.00	
PLDT	20,000.00	
Conference Fees:	508,299.65	
Sale of Conference Kits:	800.00	
Receivables: Yong Tao's accom. (c/o AIM)	18,250.00	
Expenses:		794,355.00
EDSA Plaza	510,038.15	
Tip for hotel waiters	2,000.00	
Conf. Dinner	67,063.50	
Leading Edge Consultancy	66,000.00	
Manila Bulletin	51,455.25	
Prog/notepads/kits	34,985.00	
Postage	22,630.00	
UP Filipiniana Dance Troupe	15,000.00	
City Tour	9,500.00	
Brochures/posters	9,170.00	
Fax/xerox	1,329.50	
Plaques	1,110.00	
Supplies	1,043.95	
Miscellaneous Expenses	3,029.65	
Net Revenue		26,618.95

Feature Article:

A Guide to OR/MS Resources on the Internet

by Alexander Hipolito, Ph.D.
<hipolito@mnl.sequel.net>

This guide gives a sampling of Operations Research/Management Science (OR/MS) related resources that are available world-wide via the Internet in general and the World-Wide Web in particular. It is intended for local OR/MS enthusiasts with or without Internet access. Those on the Net can immediately access these materials by entering the URLs (Uniform Resource Locators: those addresses starting with , or ftp://, etc.) in their favorite browsers. The guide also hopes to acquaint those not yet on the Internet with some of the resources available, with the view of enticing them to get on-line.

We start with the addresses of two major resource pointer collections for OR/MS-related materials. A few specific areas that can be reached via these pages are then highlighted to give a sampling of the variety of materials available. The pages mentioned here constitute a small sample of what's available and should by no means be considered as an exhaustive survey. (Notes: The descriptions of the pages listed here are mostly from the pages themselves. To save space, the URLs listed here use the *http://* protocol unless otherwise specified. For example, the URL *mat.gsia.cmu.edu* refers to *http://mat.gsia.cmu.edu*.)

General Resource Pointer Collections. Use these as starting points from which most other OR/MS-related materials can be accessed.

Michael Trick's Operations Research Page (*mat.gsia.cmu.edu*). One of the first comprehensive list of pointers to all aspects of operations research.

INFORMS Online (*www.informs.org*). The online information service of the Institute for Operations Research and the Management Sciences.

INFORMS serves the professional and scientific needs of OR/MS investigators, scientists, educators, students, and managers, as well as the institutions they serve.

Newsgroups and Mailing Lists. Mailing lists and Usenet newsgroups are the online equivalents of discussion groups and office bulletin boards. Free advice from experts can often be read here. A listing is available from *mat.gsia.cmu.edu/mlist.html*. The main newsgroup for OR/MS topics is the sci.op-research newsgroup (*news://sci.op-research*). For those without netnews access, an indexed archive is available from *www.maths.mu.oz.au/~worms/digest/digest.html*. Alternatively, those with only email-access can subscribe to the ORCS-L mailing list where digests of sci.op-research discussions are posted regularly. ORCS-L is a list for discussing topics at the interface of OR/MS and Computer Science. To subscribe to ORCS-L, send the following command to listserv@listserv.okstate.edu in the body of your email: "SUBSCRIBE ORCS-L Your_full_name" (without the quotes).

OR/MS Education Resources. These are Web pages for courses and tutorials on OR/MS topics used for handling a class, distributing course notes, assignments, supplementary material and so on.. Useful for instructors needing ideas on course development and for practitioners who want to brush up on certain topics.

mat.gsia.cmu.edu/course.html and *www.ualberta.ca/~informed/courses.htm*. Pointers to academic OR/MS courses on the web. The courses listed here range from introductory OR/MS courses to advanced optimization courses.

www.ualberta.ca/~informed/tutorials.htm and *plato.la.asu.edu/guide.html#tutor*. Pointers to tutorials on Linear, Integer, and Dynamic Programming, Spreadsheet Optimization and Network Optimization.

Optimization Frequently Asked Questions (*www.mcs.anl.gov/otc/Guide/faq*). A list of Frequently Asked Questions (FAQs) and answers concerning Linear and Nonlinear Programming.

A Guide to OR/MS From Page 11

Mathematical Programming Glossary© by Harvey J. Greenberg (*www-math.cudenver.edu/~hgreenbe/glossary/glossary.html*). This contains terms specific to mathematical programming, and some terms from other disciplines, notably mathematics, that are directly related.

Online Optimization Solvers. Facilities where you can send your optimization problems and have them solved for free.

NETWORK-ENABLED OPTIMIZATION SYSTEM (*www-c.mcs.anl.gov/home/otc/Server/neos.html*) The NEOS Server for solving optimization problems remotely over the Internet. Users of the NEOS Server are able to solve optimization problems over the Internet with state-of-the-art optimization software (linear and nonlinear programming) without downloading and linking code.

MILP (*pinnacle.edrc.cmu.edu:8080/milp.shtml*). A facility for solving Mixed Integer Linear Programs online. The page asks users not to run "big programs on this server (DECstation 5000/25). This page is intended for demonstration, and any abuse will force me to close or severely restrict this service." Uses LP-solve, a public-domain LP and IP solver which works well-enough for small or easy problems. LP-solve itself can be downloaded for free (see the list of optimization software pointer below).

Application-oriented resources. A sampling of available resources on various OR/MS applications.

Crew Scheduling, Rostering, and Transportation (*www.informatik.hu-berlin.de/~weinert/cstransport.html*). This page collects information about crew scheduling, crew assignment, rostering, vehicle routing, transport, and logistics as well as pointers to corresponding web resources.

TSPBIB (*www.ing.unlp.edu.ar/cetad/mos/TSPBIB_home.html*) Listing of papers, source code and so on for the Traveling Salesman Problem.

The NEOS Guide to optimization technology (*www-c.mcs.anl.gov/home/otc/Guide*). A web-resident source of information about optimization algorithms and applications. The Guide contains a collection of interactive case studies that show how optimization is used to solve real-world problems. The case studies include: The Diet Problem - Linear Programming; The Portfolio Optimization Problem - Quadratic Programming; The Natural Gas Planning Case Study - Stochastic Linear Programming; The Cutting-Stock Problem - Integer Programming; and Scheduling Electric Power Systems Under Uncertainty

Free Software Guides. Everyone loves a freebie. The next set of pointers contain information on optimization software, including those that can be downloaded and used for free.

NEOS Guide to Optimization Software (*www-c.mcs.anl.gov/home/otc/Guide/SoftwareGuide/index.html*). An extensive list of both commercial and non-commercial software by Jorge J. Moré and Stephen J. Wright, based on their book, Optimization Software Guide.

List of Useful Optimization Software collected by Jiefeng Xu (*ucsu.colorado.edu/~xu/software.html*) and Decision Tree for Optimization Software by H.D. Mittelmann and P. Spellucci (*plato.la.asu.edu/guide.html*). Pointers to optimization software (mostly in the public domain, i.e., free) downloadable from the net.

Commercial Software. A list of companies is given in *mat.gsia.cmu.edu/companies.html*. Downloadable evaluation versions of commercial software are also available. What follows is a list of downloadable software for modeling languages and spreadsheet-based optimization. These can be considered as user-friendly tools that have made the solution of optimization problems more accessible to small and large firms alike.

Announcements

- ### ORSP Biennial Election of Board Members

Call for Nominations

The ORSP Electoral Ad-Hoc Committee announces the call for nominations to this year's election of ORSP Board Members. Seven members of the new Board who will serve from 1998 to 2000 will be elected during the society's General Membership Meeting on May 30, 1998.

Nominees must be current members of the society. In addition, since our By-Laws limit continuous Board membership to two terms, the following incumbents are no longer eligible for nomination :

Samuel Cruz (San Miguel Corporation)
Edwin Pineda (University of Asia and the Pacific)
Olegario Villoria, Jr. (University of the Philippines)

Please notify your nominee(s) before sending your nomination(s) to :
Sam Cruz
Electoral Committee Chairman
SMC OR Department
Fax 632-3957
E-mail <samcruz@sanmiguel.com.ph>

on or before April 15, 1998. The Committee will release the final list of candidates and their credentials by April 30. •

- ### Call for Paper to the Philippine Journal of Operations Research

The Philippine Journal of Operations Research is an official publication of Operations Research Society of the Philippines on research and practice in operations research methodologies.

Papers are accepted for consideration on condition that:
- the work is original;

- you have secured the permission of all named co-authors, and have agreed the order of names for publication;
- the paper has not been previously published;
- the paper is not under consideration elsewhere;
- you will transfer copyright to the Operations Research Society of the Philippines if the paper is accepted for publication.

Before preparing your submission, please contact the ORSP Secretariat for a complete style guide.

Papers for consideration should be sent to the Editor:
Dr. Aura C. Matias
Department of Industrial Engineering and Operations Research
College of Engineering
University of the Philippines
Diliman, Quezon City 1101•

- ### ICORMS-ICORD 1997 Proceedings

Bound copies of the ICORMS-ICORD 1997 Proceedings will be available for sale starting May 30,1998, during the National OR Congress and ORSP General Assembly. The proceedings contain the papers presented during the 2nd ICORMS-ICORD Conference held at the Isla Ballrooms, Shangri-La's EDSA Plaza Hotel last November 25-28, 1998.

This book is edited by Dr. Aura C. Matias of the University of the Philippines, as General Editor with Dr. Cleta Milagros Acebedo-Filmer (De La Salle University), Dr. Cesar Tapia (University of the Philippines) and Dr. Elvira Zamora (University of the Philippines) as Associate Editors.

Advanced reservations for the proceedings may be made through the ORSP Secretariat, c/o Ms. Cherrie Platon at telephone no. 632-2802. Call in your order now!! •

A Guide to OR/MS *From Page 12*

Frontline Systems Inc. (*www.frontsys.com/index.html*). Creators of the free Excel and Quattro Pro optimization solvers. This page contains pointers to evaluation copies of enhanced versions of these solvers.

What's Best (*www.lindo.com/licwb.html*). Evaluation version of one of the first add-ins for solving optimization problems on spreadsheets.

AIMMS (*www.paragon.nl*), AMPL (*www.ampl.com*), GAMS (*www.gams.com*), LINGO (*www.lindo.com/lingo.html*), MPL (*www.maximal-usa.com*), Visual XPRESS (*www.dash.co.uk* in the UK or *m-stone-intl.com* in the Philippines). Modeling languages with interfaces to commercial LP-solvers. Most of these have downloadable evaluation or student editions limited to between 50 to 300 variables and constraints. These student editions can generally solve problems faster than the free spreadsheet-based solvers.

Online Publications. The online version of OR/MS Today, the INFORMS magazine is available from *lionhrtpub.com/ORMS.html*. Software surveys (some appeared in this magazine) are available from the Software Surveys at Lionheart Publishing Online Page (*207.69.204.147/software-surveys.shtml*). Some of the surveys that have appeared include Forecasting, Simulation, LP, Vehicle Routing and MRP II, among others.

Career-related Resources. The 1998-99 Occupational Outlook Handbook at *stats.bls.gov/oco/ocos044.htm* has an entry on Operations Research Analysts: the nature of their work, job outlook and earnings (in the US), etc. Employers can post positions to, while job-seekers can browse openings from *mat.gsia.cmu.edu/jobs.html* and *www.informs.org/Jobs/Jobs.html*.

Local Resources. There's not much available yet, aside from the Web pages of local companies and academic institutions. We end here with a call for pointers to Philippine WWW pages related to OR/MS. Hopefully, we can publish a list of such

Web pages in future issues of the newsletter. Submit your entries to the author or to the newsletter editor.

About the author. Dr. Hipolito is an asst. professor, consultant, and trainer specializing in Large Scale Systems Optimization and Modeling. •
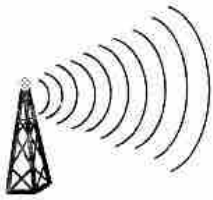
An Issue Of Mathematics *From Page 9*

markets would quickly be out of business for misreading trends in preferences, or uncontrolled inventories and costs. The O/R applications are probably some of their best-kept trade secrets.

Unfortunately, most decision-makers in our country view O/R works as a waste of time and resource. Late last year when the Operations · Research Society of the Philippines (ORSP) hosted an international convention for O/R practitioners worldwide, most companies shied away from sponsoring events. Similarly, government agencies do not take O/R or ORSP serious.

Dr. Aura C. Matias, ORSP incumbent president, however is unfazed by the artic indifference towards operations research. She would blame at times on the aloofness of O/R practitioners themselves. But still she is reaching out to government specially during the present economic crisis. In fact, she asked me to write this article.

With proper application of O/R techniques, it is thought that scientific evaluation of forex transactions can determine the extend of damages caused by waves of currency assaults or flaws in the system. While damage controls may be in place, long term solutions must be quickly instituted to lead into us recovery and remove the threats to further deterioration. The national credit system can also be studied to draw up alternatives for preventing massive defaults, or to test the stability of the banking system. Even the labor situation can be a subject of quantitative analysis and design. Point is, since government was not able to solve the problem after seven long months, it is time to call in the experts.

Reminders

- Please remember to accomplish the Membership Renewal Form and send it to the ORSP Secretariat.

  Details on the payment of the membership fee are found on the same Form.

- We need more newsletter articles. Any significant OR news (local or international), announcements views, and the like may be sent to:

  Dr. Mel Acebedo-Filmer
  Voice: (632) 5360257
  Telefax: (632) 5240563
  E-mail: coecla@coelan.dlsu.edu.ph

An Issue Of Mathematics *From Page 14*

With the respective management approval, SMCOR or a similar unit can serve as center of operation or war room. Membership to this think-tank group can be loaned from private firms and remunerated by them with tax-deductibility due to donations. Secrecy or integrity of informations can be organized as O/R analysts are used to accessing extremely sensitive data under a strict universal code of ethics. If necessary, participants can be asked to sign a covenant of secrecy with administrative or penal sanctions.

Dr. Matias is serious about her offer to help solve our present economic difficulties. She may be contacted through the U.P. College of Engineering in Diliman, Quezon City. •

Thank you very much. God bless !

From the 1996-98 Board of Officers:

President	Dr. Aura Matias
Vice President	Dr. Cleta Milagros Acebedo-Filmer
Secretary	Prof. Mary Ann Capistrano
Treasurer	Mr. Lauro de Vera
Board Members	
	Mr. Samuel Cruz
	Mr. Edwin Pineda
	Dr. Olegario Villoria Jr.

ORSP

MEMBERSHIP FORM
(Please print all entries)

Member since: _____ (Year)

Membership Classification: ☐ Academe   ☐ Private Business/Industry
(Please check one)   ☐ Government   ☐ Institutional

Name (Mr/Ms/Dr/Prof) _____
(Other _____)   *Last*   *First*   *MI*

Nickname _____   Birthday (Month/Day) _____

Company/University/Organization _____

Position and Department _____
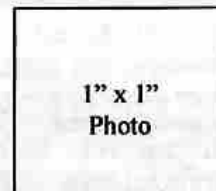
Mailing Address _____

_____

Email Address _____

Telephone _____   FAX _____

OR Field of Specialization/Interest _____

I will be pleased to be an active member of the following committee(s):
☐   Programs
☐   Research and Publications
☐   External Affairs
☐   Finance
☐   Student Affairs

1" x 1"
Photo

Signature _____   Date _____

PLEASE MAIL ACCOMPLISHED FORM TO ORSP SECRETARIAT (see address below)

Annual Membership Fee:
Academe & Government-P1,000   Private Business/Industry-P1,500   Institutional-P3,000

IMPORTANT: Make checks payable to:
     OPERATIONS RESEARCH SOCIETY OF THE PHILIPPINES

Deposit cash/check payment to: **OR**   *Mail check payment to:*
ORSP PCIBank Current Account   **ORSP SECRETARIAT**
No. 0922-09190-0 at any PCIBank branch,   c/o Management Engineering Dept.
then fax validated deposit slip to   Ateneo de Manila University
ORSP Secretariat Fax No. 924-7269   Loyola Heights, 1108 Quezon City

FOR INQUIRIES, please contact:
Cherrie I. Platon
Tel. 924-7269 / Pager: 125-1089391 / Email: chepltn@cnl.net