

April 2005

## **ORSP Gears Up for Regional Meeting**



APORS executives Mukherjee and Ibaraki with IFORS President Toth declare Manila as host of the seventh APORS during the closing ceremonies of APORS 03 in Delhi.

Preparations for the Asia Pacific Operational Research Societies (APORS) Conference move to high gear as the January 16 to 18 date set for the traditional triennial meeting approaches. (See First Call for Papers on page 6) Back in 2003 in New Delhi, Manila was declared the site of the 2006 Congress. This conference has traditionally attracted more than 300 delegates from around the region. The Management Science/Operations Research Society of Malaysia, co-hosts the conference through the appointment of its President, Han Chun Kwong, as the Program Committee Chair.

Everyone is invited to be a part of the working committees. They include: The Solicitation committee, headed by Budget and Finance Director Tristan Macapanpan. It will look after controlling costs and enhancing revenues through sponsorship solicitation. Sponsorships will subsidize fees of local participants. The Speakers committee headed by Elise del Rosario will be taking the lead role in inviting speakers who will add most value to the confer-

ence objectives. Richard Li and Dennis Beng Hui, as committee, will put up a system to respond quickly and adequately to all the participants and guests requirements for meeting rooms and social activity venues. To enable participants to share ideas in a relaxed atmosphere that get them to know more about the Philippines is a task entrusted to the Social Activities team of Alleli Domingo and Bobby Baylon..

The Technical Program committee handled by Han Chun Kwong of Malaysia, will have a local counterpart chair in the persons of Dennis Cruz and Malu de Guzman. Close coordination in the paper reviews and assembling the abstract book will be the main tasks of this group.

Noti Macalalag and Wilson Tiu will head the registration process and assemble the registration paraphernalia in the Registration committee. This Committee will ensure the smooth flow of registration as well as the availability of sufficient conference materials such as the kits and tokens.

(Continued on page 5)

### UPLB Responds To Membership Drive; Renewals Up

UPLB registered an impressive number of new members for 2005, ORSP welcomes you all: Enrico A. Leonor, Confidential Assistant of the Office of the Board Director of Land Bank of the Philippines; May Annbelle F Reyes, Account Assistant of Solutions Insurance Brokers Inc. and Mary Louie L. Gonzales of Lubos Lingkod Development Foundation at Laguna and Jericho S. Bautista, Actuarial Supervisor of the Actuarial Department of New York Life Insurance, Philippines. From the academe are: Dr. Silverio S. Obungen, retired UPLB Professor, joined by Math Division Instructors of the Institute of Mathematical Sciences and Physics at UP Los Baños: Maica Krizna D. Areja, Julie Ann P. Atole, Marwin T. Macalandia, Sharon P. Lubag and Jerrold M. Tubay.

Meanwhile, a big welcome back to Francis Miranda, Business Development Associate from Zuellig Pharma Corporation who, this early, has submitted an abstract for presentation to the APORS Conference.



(3)



Leonor

Reyes

Gonzales







Bautista

Obungen

Areja







Atole

Lubag

Tubay



#### From the President:

# The Gains of 2004 and the Challenges of 2005

Being one of the founding members of ORSP and its President 17 years ago, I could not believe I was President again, even as I came out of the first meeting of the newly elected Board. Perhaps I finally relented, because 1 knew that 2005 would be one that is full of challenges.

#### The Gains of 2004

This is not to say that 2004 lacked challenges. Led by Vic Reventar, ORSP had an eventful 2004, marking as it did, a series of firsts for ORSP. It was the first time that an International Teacher's Workshop, cosponsored with the International Federation of OR Societies (IFORS), was held from July 19 to 21 at the Peninsula Manila. Teachers from all over the Philippines, including three from South Africa, benefited from the accumulated expertise of Profs. Erkut (Canada), Sniedovich (Australia) and Datta (India). Participant feedback, specifically on the action planning part, was very encouraging and left the Board feeling very well rewarded for its ef-

2004 was also the first time that ORSP became the recipient of a donation that came out of the benefits of an OR study. This came in the form of a P 200,000 Bank of the Philippine Islands (BPI) donation to ORSP, in recognition of the benefits of the ATM Cash Inventory Study done by ORSP President Vic Reventar.

Meanwhile, early in the year, students held their traditional Student Congress. 300 participants from seven schools attended, listened to the speakers, and cheered on their school representatives to the Quiz Contest. Some 10 new members were inducted into the ORSP, and they were featured in the two newsletters issued out in March and October, 2004.

#### What to expect in 2005

ORSP had been instrumental

in organizing a lot of international conferences – the International Conference on OR/MS (ICORMS), the International Conference on OR in Development (ICORD), and of course, the International Workshop for Teachers in Developing Countries.

But I think that the coming Asia Pacific Operations Research Societies (APORS) Conference slated for January 2006 here in Manila will be ORSP's greatest challenge yet. And why is this so?

APORS, the Asia-Pacific grouping of national societies under the International Federation, (IFORS) has traditionally attracted no less than 200 participants from the national member societies of China, Hong Kong, India, Japan, Korea, Malaysia, New Zealand, Singapore, and of course, the Philippines. Held only every three years, the APORS Conference has consistently been the event Asian OR practitioners and academicians look forward to for the breadth and depth of topics that are tackled as well as the quality and level of participation it generates. ORSP is therefore hard pressed to attain, if not exceed, APORS participants' expectations. Preparations for this conference have been distributed to various committees headed by Board Members. (See article on page 1)

While recognizing the huge task it faces, the Board has resolved to ensure that:

 Members are continuously updated on all activities through the regular publication of the ORSP Newsletter;

-Through the leadership of ORSP past president, **Dennis Beng Hui**, the ORSP Committee on Public Service will continue its thrust of helping optimize government resources through the use of Operations Research;

 Member development through regular member involvement in such nationbuilding such projects as the ORSP Corps are pursued;

-Members are regularly encouraged to

## July General Assembly to Focus on Regional Concerns

The ORSP Board decided on April 16 to hold the 2005 General Assembly in July. To be chaired by Dennis Cruz, this membership meeting will carry the theme "OR: Addressing Regional Optimization Concerns." It is seen as an opportunity to highlight OR applications with a regional focus and bring out optimization concerns and issues that can be tackled more fully by the regional participants of the 2006 APORS.

The venue and exact date will be announced later. This affair will also feature a gettogether to give members time to share not only their OR models but also their other hidden talents (an OR Star Search?) in a relaxed environment Please watch out for the next announcement.

exchange ideas and be exposed to current OR issues through the general membership meeting. This year, this has been slated for July. (Details found in the next column.)

-Members continue to benefit from their ORSP membership, at the same time that the Society continues to grow. This task is under the responsibility of Director Alleli Domingo.

 APORS Proceedings are shared with the members through the publication again of the Philippine Journal of Operations Research, to be edited by Directors Lowell Lorenzo and Malu de Guzman.

-The future practitioners- the students are given opportunities to learn more
about OR through the annual Student
Congress which features resource speakers from ORSP, the quiz and paper competition. Directors Lowell Lorenzo and
Rex Robielos take leadership of this role.

As you can see, 2005 promises to be challenging and exciting for all of us. Make sure YOU are a part of it!

## A Mix of the Old and the New: ORSP Elects Officers for 2004-2005

ORSP Board Election was held last December 14, 2005 prior to the Christmas party. The new set of officers is composed of Elise Del Rosario as President, Agnes Grace Perez as Vice President, Alleli Domingo as Secretary, Tristan Macapanpan as Treasurer. The other Board Members are Dennis Cruz, Richard Li, Rex Robielos, Bobby Baylon, Lowell Lorenzo and Ma. Lourdes De Guzman.

One of the founding members of the Operations Research Society of the Philippines, Elise del Rosario is the former ORSP Corps Chair, and OR Manager and Vice President of San Miguel Corporation. She first served as ORSP President in 1988 and since then held positions at the regional and international OR body. Vice President

Agnes Grace Perez is a Scnior Analyst at San Miguel Corporation. She is a graduate of BS in Mathematics at UP Diliman, and an MS in Management Science from the Imperial College of Science and Technology. A PhD candidate at Columbia University, she was last year's ORSP Secretary.

Alleli Domingo carned her degree BS in Applied Mathematics at UP Los Baños, MS in Mathematics at UP Diliman and MS in Mathematics at the University of Melbourne in Australia. She is an Associate Professor in the Institute of Mathematical Sciences and Physics of UP Los Baños.

Tristan Macapanapan is a graduate of BS in Mechanical Engineering at the University of the Philippines, Master of Business Management at the Asian Institute of Management and a Doctor of Business Administration candidate at UP Diliman. His thirty years of industry experience is complemented by his academic experience as a faculty member at UP Diliman and University of Asia and the Pacific Management School. He also works as the consultant to OC government. At De La Salle University's Graduate School of Business, Professional Schools Inc., he currently holds



Elise del Rosario



Tristan Macapanpan



Dennis Cruz



Rex Robielos



Lowell Lorenzo

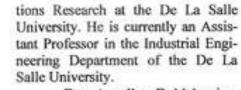


Malu de Guzman U

the position of Vice-Dean, Ortigas Campus.

Dennis Cruz is a graduate of BS in Industrial Management Engineering minor in Chemical Engineering. He earned his MS degree in Industrial Engineering at De La Salle University where he is Assistant Professor of Industrial and Management Engineering. He previously served as its Chairperson and ORSP Treasurer.

Richard Li is a graduate of BS in Industrial Management Engineering minor in Mechanical Engineering and MS in Industrial Engineering with specialization in Opera-



Rex Aurelius Robielos is a graduate of BS in Applied Mathematics major in Operations Research at the UP Los Baños and subsequently, an MS in Industrial Engineering at UP Diliman. He is currently an Assistant Professor of the School of Industrial Engineering at the Mapua Institute of Technology.

Dioscoro Baylon is a graduate of BS in Civil Engineering at UP Diliman, From La Salle, he obtained his BS in Accountancy, Master in Business Administration, and MS in Computational Finance. He is currently a PhD candidate in Business Administration and Chairperson of career Development Program of the De La Salle University and its Instructor in Human Resource and Management Program.

Lowell Lorenzo is a graduate of BS in Industrial Engineering, UP Diliman and MS in Operations Research at the Case Western Re-He is curserve University, USA. rently an Assistant Professor at the Department of Industrial Engineering and Operations Research at UP Diliman. His thirteen years industry experience were spent with Lucent Technologies, Intel Technology, Triumph International, and Philips Semiconductors.

Maria Lourdes de Guzman U is a graduate of BS in Math at Ateneo de Manila University, MS in Applied Mathematics major in Operations Research at U.P Diliman and Ph. D. in Industrial Engineering at Purdue University, USA. She served as a faculty member at UP Diliman, Ateneo de Manila, and abroad. She has worked as a supply chain analyst and a software consultant in the electronics industry. (See page 7)+



Agnes Grace Perez



Richard Li



Bobby Baylon

## **Creating Innovations Toward Success**

The 2005 Operations Research Congress and Quiz Contest

by Judell H. Cruz, Student Congress Organizing Committee Chair



Quiz First placer ADMU team displays hard-earned medals, trophy and cash prize, as proud coaches and ORSP Board Directors look on..

March 5, 2005:The Abelardo Hall at UP Diliman's College of Music played host to a highly-anticipated annual event: The 2005 Operations Research Congress and Quiz Contest. Complete with an orchestra pit, the venue gets one into thinking about the relationship of OR to music. Many will disagree—for after all, OR is as hard a science as you could get. One talk after another showed the astonishing capabilities of OR, one of the most unique and most quantitative problem solving tools that can be applied to almost any field.

Nonetheless, one may still believe that the event is indeed of the music genre, for Operations Research is very much like music - a group of symphonies so powerful and universal - capable of uplifting any person or group of individuals from an undesirable state.

The OR Congress and Quiz Contest is a yearly project of the ORSP. It is organized by the ORSP student chapter officers who work under the guidance of the mother organization. It is a one-day event consisting of a seminar and paper competition in the morning, and a Quiz contest in the afternoon. The seminar is conducted by OR practitioners and professionals from the industry who are invited through the mother organization. Here, students get to see how OR works and the work they can expect to do with this tool. This is followed by OR Paper Writing Contest where students convince a board of highly-discerning OR experts that they have properly used OR to solve a real-world problem. In the afternoon, the annual OR Quiz Contest is held. This is participated in by schools which offer OR as part of their degree programs in IE, Math or Business. Each school sends its student contestants complete with coaches and cheering squads. After all, winners get not only the medals, trophies and cash, but also the prestige of emerging the champion.

The March 5 event started with a flash presentation showing the school members of the ORSP Student Chapter. The audience went wild as they recognized schoolmates' pictures in the presentation. This was followed by a heart-warming opening talk given by ORSP Board Director Rex Robielos, adviser of the ORSP student chapter. Right after the presentation of the two speakers, the annual OR Paper Writing Contest took place. Ateneo de Manila University and University of the Philippines Diliman competed for the Student Paper Competition Prize.

I would say the 2005 Operations Research Congress and Quiz Contest was a success, for once again, students went home with new insights about OR. Mine is that OR is much like the music that one hears wafting out of the Abelardo Hall on any other performance.



Jubilant second and third placers DLSU and UP Diliman show off their medals and cash prixe.

## **ORSP Student Chapters Sponsor Student Congress**

by Alleli Domingo

A gathering of over 450 operations research students and faculty members was held on Saturday, March 5, at the Abelardo Hall, University of the Philippines Diliman. The program began at 9:30 AM with a flash presentation featuring the participating schools, namely Ateneo de Manila University, De La Salle University, Colegio de San Juan de Letran Calamba, Mapua Institute of Technology, University of the Philippines Diliman, UP Los Banos, and University of Sto. Tomas. This year's conference theme was "Creating Innovations Towards Success": There were two plenary lectures for the morning session, followed by an open forum. Sam Cruz, Asst. Vice President of San Miguel Corporation gave an overview of the various applications of Operations Research in strategic, tactical and operations planning. Board Director Ma. Lourdes de Guzman U presented the highlights of her Ph. D. research entitled "Experiments with Nonlinear Discriminates in the Analysis of Fine Needle Aspirates", inclusive of the mathematical programming formulation, results and sensitivity analysis. Dr. De Guzman's nonlinear programming techniques for classifying breast tumor samples, contributed to the refinement of breast cancer detection techniques.

There were two entries to the student paper



The quizmaster, Mr. Richard Li and paper competition presenters from ADMU and UP

writing contest: A Dynamic Programming Model of Perishable Goods Inventory by Jennipher D. Cruz and Bernice Pearl L. Tan of UP Diliman, and Inventory Management, Raw Materials Planning and Scheduling For Stone Works Specialists Inc. by Paolo Luiz Bonifacio, Rea Mae Caracena, and Ma. Francesca Elum, Christopher Punsalan and Timothy Robin Teng of Ateneo de Manila University. Questions were posed to the contestants by members of the Board of Judges composed of Elise del Rosario, Agnes Perez and Dennis Beng Hui. The judges deemed it best to withhold the prize this year.

After the lunch break, the 15th annual OR Quiz contest ran from 1:30 to 5:00. Former serial champions, the Ateneo de Manila University team bagged the gold, with the De La Salle team as first runner up and UP Diliman team ranking third. Aside from the medals and trophies, cash prizes were also awarded to the winners: three, two and one thousand pesos for the first, second and third places, respectively. The Ouiz Contest Board of Judges was composed of Dennis Cruz of DLSU, Lowell Lorenzo of UP Diliman, and Rex Aurelios Robielos of Mapua Institute of Technology. Richard Li emceed the contest. •

## ORSP Gears Up for Regional Meeting

(Continued from page 1)

Leading the communications efforts are ORSP's excellent communicators, Agnes Perez and Alleli Domingo, who will get the conference known internationally, as well as keep the details of registrants. They will look after the website and other media efforts to promote the conference. Also promoting the conference on the local side is the team from UP Aura Matias/Lowell Lorenzo/Marlene Gutierrez.

Bobby Baylon and Wilson Tiu's committee on Special Events are charged with delivering a successful and memorable opening and closing ceremonies by coordinating all activities relating to this. Student Affairs committee chairs Rex Robielos and Alleli Domingo will plan out the volunteer roles, fees and participation for the conference.



Guest speakers de Guzman and Cruz with their plaques pose with ORSP Board: Cruz, Robielos, Perez, del Rosario, Lorenzo and Domingo

## APORS 2006 January 16-18, 2006

The 7th Conference of the Association of Asia-Pacific Operational Research Societies within IFORS

### Operations Research: Optimizing Resources for Outstanding Results

#### INVITATION

The conference seeks to bring together OR researchers, academicians and practitioners, whose collective work has sustained continuing OR contribution to decision-making. The conference will provide a forum where:

-Researchers could present their findings dealing with the theoretical, computational, and application aspects of operations research;

-Practitioners could share their experiences on the problems, methodologies and outcomes of applying OR to solve real-world problems.

#### KEYNOTE AND INVITED SPEAKERS

International prominent OR researchers and practitioners will be invited by the organizers to deliver keynote speeches and to participate in the panel discussions. Their names will be announced as soon as confirmations are received.

Delegates of the national member societies of APORS will be invited to present their National papers during the Conference. Panel discussions on OR in Business, Education and Gov-

#### APORS Member Societies

Australian Society for Operations Research, Korean Operations, Research and Management Science Society, Management Science/ Operations Research Society of Malaysia, Operational Research Society of Hong Kong, Operational Research Society of India, Operational Research Society of New Zealand, Operational Research Society of Singapore, Operations Research Society of China, Operations Research Society of the Philippines, The Operations Research Society of Japan

ernment will be arranged.

#### TUTORIAL/WORKSHOP

Several workshops/tutorials are planned. Each workshop/tutorial will focus on a particular topic, and consist of several presentations and open discussions. A one-page abstract of each workshop/tutorial presentation will be published in the Abstract book. The proposal for a workshop/tutorial should include the title, topics covered, proposed speakers, targeted audiences, and estimated length (in hours) of the workshop/tutorial. Proposals should be submitted to the program chair

#### ABSTRACT SUBMISSIONS

Papers reporting original and unpublished research results and experience are solicited.

Extended abstracts are required after the Technical Program Committee accepts the initial submission.

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

Paper/proposal title,

Abstract/extended abstracts of not more than 200 words.

Author(s), Name(s), Organisation, and full mailing address, email address, with indication of the presenter,

An indication of the topic (at most three chosen from the Conference Topics List) or suggestions for additional topics.

Authors can submit their abstracts through any of the following:

-Direct email to the Program Chair, hanck@pc.jaring.my; han@putra.upm.edu.my.

APORS Conferences	
Year	Country
1988	Korea
1991	China
1994	Japan
1997	Australia
2000	Singapore
2003	India
2006	Philippines

Important Dates

On-line submission for abstracts starts: February 15, 2005

Deadline for abstract submission:

June 15, 2005

Notification of acceptance:

July 15, 2005

Deadline for early registration:

September 1, 2005

Deadline for author registration: (for inclusion in Abstract book)

December 1, 2005

#### CONFERENCE TOPICS

Submissions of papers aligned with the Conference Theme in the following areas are welcome: Banking and Finance, Mathematical Programming, Corporate Strategies, Modeling, Decision Support Systems, Management Information Systems, Distribution Management, Marketing, Energy, Production Planning, Engineering Production Control, Expert Systems, Project Management, Financial Investment, Queuing, Forecasting System Dynamics, Health and Welfare Services, Transportation, Inventory Control, Innovation/Knowledge Economy, Supply Chain Management, Customer Relationship Management. Complexity Theory, Soft System Methodologies.

#### **ORSP's Pride**

Dr. Aura C. Matias, past president of the Operations Research Society of the Philippines, was among the 2004 roster



Dr. Aura C. Matias

of The Outs tanding
Women in the
Nation's Service e
(TOWNS).
The TOWNS
award is given
every three
years to women
who have not
only excelled in

their own fields but also helped build the nation. Twelve women achievers received their TOWNS award during ceremonies held in Malacanang, with President Gloria Macapagal-Arroyo gracing the affair. Dr. Matias has been an active member and officer of the ORSP. During her term as President, ORSP hosted the 2nd ICORMS-ICORD conference in the Philippines for which she co-edited the Conference Proceedings.Dr. Matias is the current chair of the Department of Industrial Engineering & Operations Research of the University of the Philippines College of Engineering in Diliman. She was recognized for her role in setting the curriculum industrial engineering education, organizing industrial engineers in the Philippines and editing inter-



national journals. ♦

Board
Director Maria
Lourdes de
GuzmanU,
Ph.D., placed
first in the
1999 Pritsker

Dr. Malu de Guzman U Doctoral Dissertation

Award given by the United States' Institute of Industrial Engineers. De Guzman's paper, "Experiments with Non-linear Discriminants in the Analysis of Fine Needle Aspirates," bested all other entries from across America.

The research devised non-linear programming techniques for classifying breasttumor samples. She presented her paper and at the same time received her award

## **ORSP Prexy Guests as Panelist in Indian Confab**



Del Rosario emphasizes a point during her talk on Strategic OR.

ORSP President Elise del Rosario spoke on OR in Development and Strategic Applications during the 37<sup>th</sup> annual convention of the Operational Research Society of India held from January 8 to 11, 2005 in Ahmedabad.

Attended by more than 300 delegates, the Conference was held at the H.T. Parekh Convention Center of the Ahmedabad Management Association, as well as the at the Indian Institute of Management. Thomas Magnanti, IFORS President and Dear of Engineering, MIT; Peter Bell, framer IFORS President and Professor, Richard Ivey School of Business, Rajiv Banker, Dean of the Anders a Graduate School of Management, University of California were some of the interna-

tional speakers featured.

The conference theme, "The Strategic Role of Operational Research", was a highlight of almost three hundred papers presented at the conference. They covered theory and applications in the fields of market research, production planning and scheduling, procurement, supply chain optimization, customer relationship management, process improvement, inventory management, public transport, business processes, workforce management, airport management, health care, water distribution, and education. Robotics, fuzzy approach, goal programming, genetic algorithms, GIS-based models and e-governance were also tackled.

For her part, del Rosario drew on her extensive consulting experience both in the private and public sectors to talk about the Strategic Role of OR. She discussed three examples in the fields of supply chain optimization, operations management, and production planning. For her panel on OR in Development, she showed the work that has been done by ORSP's own Committee on OR for Public Service (ORSP Corps) as an example of how a national OR society could extend a helping hand in nation-building.

Magnanti, in his keynote speech, talked about the evolution of optimization as a field and discussed recent advances and applications. His account of the early contributions of some of the famous scientists of the past to the glorious history of optimization was most enlightening. Bell, in his plenary talk on Revenue Management, demonstrated the basic concepts used to enhance revenues while selling the same quantities of products. He explained the five tools of the revenue manager, namely, pricing, discount allocation, trading-up, overbooking and replaning.

Banker talked about the use of data envelopment analysis (DEA) to evaluate the relative efficiency of comparable organizations. He summarized recent advances where rigorous DEA based tests have been developed to address applied problems. Other plenary lectures and tutorials dealt with the experimental supply chain for fresh vegetables in Ahmedabad, the relationships of analytical thinking to business excellence, stochastic finance, teaching Markov chains and probabilistic dynamic programming using spreadsheets, and operations management modeling.

Conference participants were welcomed to Ahmedabad (Gujarat's former state capital noted as Mahatma Gandhi's second home) by Convention Chair N. Ravichandran, who himself has been a participant in the 1990 and 1997 OR conferences in Manila.

# **ORSP Elects Officers, Then Celebrates Christmas**

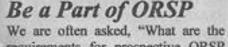
By Marlene Guttierez

Another Christmas and another ORSP party was held at the del Rosario home in Acropolis last December 14, 2004. So what's new? The general assembly meeting that preceded the party! Almost 20 people came to personally cast their votes in the ORSP board elections, dominated by the OR Department of San Miguel Corporation and headed by Sam Cruz. There was some turnover in the board membership, and the Comelec composed of Leah Mendoza and Sam Cruz declared the elections a success.

They also came to eat, drink and play games. A delicious buffet dinner was served and all of the attendees ate their fill. A few very competitive games were played with prizes awarded to the winning teams. The first game had people (8 to a team) holding cards with a letter on each side. The Gamesmaster (and host) Bing del Rosario would give out clues and the players in each team would try to spell out the word that the clues defined. Because there were duplicate letters held by different persons, there was some confusion about which person will represent that letter. It was a fun game with people running around trying to spell words and whispering the answers so that the other team will not get the answer.

An exchange of gifts followed the first game, so that those who had to leave early can still bring home their gifts. The gifts were numbered and the attendees drew a number to determine which gift would be theirs. As a second mind-game, Bing showed pieces of paper with initials on them, and people would guess what the initials mean. Because of the difficulty of the game, no points were kept and people just enjoyed thinking about the answers. One interesting clue was 3 = T B M (S H T R). See if you can get it!

The last game involved reading cards from the game Mind Trap. Bing would read out the clues and people would try to guess the answers. Agnes Perez had more answers correct than any other player and helped her team to victory. Sam Cruz gave out San Miguel calendars and certain themes were a hit with the men.



we are often asked, "What are the requirements for prospective ORSP members- do we have to be good in Math?"The Answer is NO. You just have to know what OR is and be convinced of its use in optimizing resources.

## Have you renewed?

If you have received calls asking you to renew your membership, don't waste any time! Fax back the form with your personal details to 439-9496 or e-mail it to ORSP Secretariat at secretariat@orsp.org.ph. . Please indicate your interest in being tapped for the ORSP Committee on OR for Public Service.



ORSP members, mostly from SMC, prepare their ballots amid Christmas gifts and décor.

# ORSP

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#### **ORSP Newsletter**

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