

ORSP NEWSLETTER

Official Publication of the Operations Research Society of the Philippines

GMA, Int'l OR Luminaries Headline APORS 2006 Manila

By Malu de Guzman U



The guest of honor arrives with Sec. Peña

The January 16-18 APORS plenary and invited sessions showcased a wide range of topics within and related to Operations Research by leading authorities and practitioners from around the world. Opening the conference was Her Excellency **President Gloria Macapagal-**

Arroyo, who impressed the international audience with her familiarity with OR as a discipline. After citing several OR success stories from other countries such as Chile and China, she challenged OR practitioners to help solve problems facing the Philippines.

A comprehensive and enlightening perspective on optimization was then provided by International Federation of Operational Research Societies (IFORS) President and Dean of Engineering at Massachusetts Institute of Technology **Thomas L. Magnanti**. As one of the fourteen Institute Professors at MIT, and former president of both ORSA and

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June 21 General Assembly: Technical Forum to Focus on Distribution, Logistics and Supply Chain Issues

Fierce competition in today's markets and heightened service delivery expectations have forced businesses to take a closer look at and invest in their supply chains. On the other hand, continuing advances in the Internet, transportation technologies and Operations Research, have brought about the unabated development of techniques for managing supply chains.

To help members appreciate and share their Supply Chain issues and challenges as well as the impact of

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Marketing Brochure

In the 21st century, the country's most successful executives will be producing outstanding results by optimizing the resources at hand and making decisions with better outcomes. How? Through Operations Research methods and techniques.

So goes the cover of the marketing brochure that ORSP has recently released. It contains the types of problems that have so far been successfully solved using OR. It also points to other resources, and of course, discusses the ORSP objectives, organization and activities.

If you have not received your copy, call the ORSP office.



Elise del Rosario welcomes GMA, Peña and luminaries T. Magnanti, C.Han, and SJ Park.

GMA, International Luminaries Headline APORS 2006 Manila from page 1

INFORMS, he was an authoritative guide who took his audience through an engrossing trip of the rich history of optimization - from the ancient civilizations to present leading-edge technologies and applications.

He then took on the role of IFORS President as he introduced the *IFORS Distinguished Lecturer*, **Prof. Dominique de Werra** of the Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. De Werra was awarded the 1995 EURO Gold Medal



Magnanti gives IFORS award to de Werra

for his contributions to OR and to its development in Europe. His accomplishments and expertise were very evident in his very comprehensive but light treatment of state-of-the-art graph coloring models in combinatorial optimization. He illustrated basic graph coloring models through scheduling, frequency assignment in telecommunications, printed circuit testing, and satellite communication examples. He showed how these are modeled as graph coloring problems and formulated as integer linear programs, for which there are several practical algorithms. He pointed out that many real-life problems such as batch scheduling in industrial processes and robotics require extensions and variations such as the coloring of oriented and mixed graphs and "weighted" coloring or chromatic batch scheduling. The latter model is extremely difficult to solve and is known to be NP-complete for several types of graphs. Motivation for his work arises from

applications, leading to the need for more coloring models, which, in turn suggest new applications.

Eliciting a lot of comments was the Monday afternoon treatise on the interdisciplinarity of OR/MS by **Prof. Heiner Muller-Merbach**. Muller-Merbach is professor for business information systems and OR at the University of Kaiserslautern, Germany, since 1983. He talked about interdisciplinarity as an old virtue of early OR/MS. Many in the audience agreed with his proposition on the need to bridge the gap between the natural or engineering scientists on the one hand, and economic and social scientists on the other.

A presentation of **Sim Cheng Hwee** on OR for outstanding results in business and governance tackled the extensive array of OR solutions that address complex business problems encountered in areas such as logistics and manufacturing in the Asian setting. Sim Cheng Hwee is the Managing Consultant and founding director of Integrated Decision Systems Consultancy Pte Ltd in Singapore.

Both new and experienced revenue management practitioners picked up a lot from the Tuesday morning Plenary Session of **Prof. Peter Bell**. He went through the basic concepts used to enhance firm revenues while selling the same quantities of products, as well as the revenue managers tools of pricing, discount allocation, trading-up, overbooking, and short selling. Bell, who was the 2005 INFORMS prize awardee for teaching the practice of OR/MS, is a professor of management science at Ivey and a past IFORS president.

Prof. N. Ravichandran, in the Tuesday afternoon Invited Session, shared novel and thought-provoking applications of OR in India, namely: management of a pilgrimage center; l

logistics of the Bombay Dabbawallahs; and maintenance of law and order in religious functions and elections. The Indian delegation was present, giving inputs into the cultural context of the presentation. Ravichandran is a professor at the Indian Institute of Management in Ahmedabad, India.

The third day Plenary Session brought back **Prof. Heiner Muller-Merbach**, who, this time, shared very well-thought out holistic conceptual models of the enterprise as a socio-technical system. He then related this to the mathematical structure from the OR/MS tradition. **Prof. Ralph A. Ante** of the Graduate School of Business of the Ateneo de Manila University conducted a well-received tutorial on linear programming and the use of the standard Excel SOLVER package in solving LP problems.

APORS' Closing Program featured **Prof. Peter Bell** and **Sec. Virgilio L. Peña**. Bell showed empirical evidence that strategic OR is alive and well. As Chairman of the Commission on Information and Communications Technology (CICT) of the Philippines, Peña talked about the vision and goals of CICT and how OR can provide the necessary tools to help achieve these goals.

The wide-ranging topics and highly-qualified speakers provided a well-rounded view of the history, theory, applications, complexities, problems successes, and most of all, the value of OR in our lives.



Organizers get well-deserved recognition

Young Scholars Give High Marks to IFORS Program

by Elise del Rosario

Delegates from India, Korea, New Zealand, Philippines, and Singapore comprised the first batch of the IFORS Young Scholars Program for APORS. With the APORS conference as a venue, the **IFORS Young Scholars' Program** was conceptualized to help build among young OR scientists in the Asia Pacific region an awareness that:

- ▶ They are a part of a group of eager young people working in various fields of OR amidst different environments and cultures;
- ▶ The rich experience of other people is available for them to tap; and
- ▶ There are vast opportunities for contributing to the work of others.

The program brought together the following participants: Gene Paul Gerard C. Ambrocio (Research Associate, University of Asia & the Pacific, Philippines); Geoffrey Bryan Ang Chua (Research Scholar, National University of Singapore); Stuart Donovan (Graduate Transportation Engineer, New Zealand); Wilfrido D. Kabiling (Instructor, De La Salle University, Philippines); Hong Joo Lee (Graduate School of Management, Korea Advanced Institute of Science and Technology); Ki -Dong Lee (Ph. D student, Research Associate, Korea); Joan C. Manahan (Assistant Professor, Mapua Institute of Technology, Philippines); and Iris Ann G. Martinez (Assistant Professor, University of the Philippines).

The conference featured a special track opened by IFORS President Tom

Magnanti and moderated by ORSP Board Directors Aura Matias, M. de Guzman U and D. Cruz. The format offered the participants an opportunity to discuss their respective work among themselves and exchange ideas with senior lecturers everyday during the three-day conference. They were divided into groups and guide questions were given for discussion pertaining to the papers presented for the day. At the end of the Conference, they were awarded certificates of participation.

Feedback gathered at the end of the sessions showed that this program filled a need and there was a clamor for its continuation. One common observation among the participants was the need for a longer program duration to enable more interaction. Based on the comments, one may conclude that the program was successful in enabling the creation of good social and professional linkages that could help in the future work of these OR workers in the region.

Administered by the APORS '06 Organizing Committee, International Federation of OR Societies (IFORS) made available free registration to ten scholars (one from each member society) to the APORS 2006 conference. National societies helped their delegates, in varying degrees, to obtain travel support. Slots not availed of were made available to the other applicants.

Candidates were screened and selected by Prof. Dennis Cruz and Dr. Malu de Guzman U.



Ten APORS Young Scholars pose for posterity with Peter Bell and ORSP's Cruz, Matias, U, and Del Rosario

Best APORS 06 Applied and Theoretical Papers Cited

The 7th Conference of the Asia Pacific Operational Research Societies authors coming from over ten countries in Asia and around the world presented 54 papers which were organized into two parallel tracks.

The papers covered a wide range of original, relevant new research in OR, from the applied such as facilities management and financial appli-



Delegate from Malaysia presents paper.

cations, to the theoretical such as chaos and game theory. From among the papers presented, a panel of judges chaired by Dr. Aura C. Matias and APORS Technical Program Chair Han Chun Kwong awarded the **Best Theoretical Paper** to Geoffrey Bryan A. Chua (Singapore) for his paper entitled "On the Value of Process Flexibility Structures Considering Sales Revenues and Production Costs". The **Best Applied Paper** award went to "Wind Farm Optimization" by Stuart Donovan (New Zealand). The authors received their award plaques at the APORS closing ceremonies held at the Dusit ballroom on the last day of the conference. Prof. Han was upbeat and suggested that the youthful awardees perhaps symbolize the field of OR in the Asia Pacific: dynamic, energetic, and full of promise.

Socials Lighten up the Conference

Social events, chaired by Board Director Alleli Domingo, served to provide a welcome break to the marathon technical sessions of the APORS 06. Amidst inspiring strains of piano pieces at Dusit Nikko's Drum and Bass Mezzanine, guest speakers and delegates were given a chance to be introduced and to get re-acquainted with contacts from previous international OR gatherings at the welcome cocktails on the early evening of Sunday, 15 January 2006. There was an abundance of food and wine, smiles and laughter that set the mood for the opening ceremonies the following morning.

A half -day city tour for accompanying persons and interested conference participants was coordinated with Dusit Hotel and facilitated by the Interisland Travel and Tours. Interesting highlights of the tour on the morning of January 17, 2006 are Fort Santiago, the Rizal Park, the Cultural Center of the Philippines Complex, the American Cemetery and Memorial and the central business district of Makati. On the evening of the same day, country representatives, ORSP Board members and their spouses were treated to a sumptuous APORS President's dinner at the Makati Shangri-la Hotel. A wide variety of delectable dishes were laid at different buffet counters. In recognition of the efforts of the APORS conference-working committees, IFORS Distinguished Lecturer Prof. Dominique de Werra coined a delightful alternative to the conference theme of Operations Research: Optimizing Resources, Outstanding Results. He proposed *OR: Organization Remarkable*. The new OR term was readily affirmed by everyone around the table.

On the last night of the three -day conference, the closing banquet held at Dusit Hotel's Ballroom 2 was

appropriate for unwinding time. Dr. Romulo Pizana of UP Diliman serenaded the participants with two love songs while ORSP Director Bobby Baylon rendered a song coupled with sign language features. The Benildanz Troupe of La Salle College of St. Benilde performed contemporary creative movements followed by the traditional Muslim royal dance, Singkil. Members of the audience were asked to participate by weaving their feet in and out of the rhythmic clapping of four intersecting bamboo poles. The night ended with line dancing to the tune of Soca music led by the youngest ORSP member, math instructor from the University of the Philippines Diliman. Rozano Santos.

Everyone was in a light mood at the end of the conference - a tribute to the success of the social program planned and followed through by Board Directors Alleli. Bob and Agnes.

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Focus on Supply Chain Issues

OR in all these, ORSP focuses on supply chain for its first 2006 Technical Forum.

The Forum, followed by the General Assembly Meeting will be held on June 21, Wednesday. Invited forum speakers include Dante Briones, CEO of Bayantrade, Juan Carlo Marcelo, Head of the Confectionery Supply Chain, Supply Chain Management (SCM) of Nestle; Francis Miranda, Operations Research and Distribution Manager of Zuellig Pharmaceuticals, Philippines Inc.; and ORSP President Elise del Rosario. The special participation of the Distribution Management Association of the Philippines and the Supply Chain Association of the Philippines is being arranged.

Final details on the venue will be announced by May. For reservations and other inquiries, please contact the ORSP Office.



Above, APORS Council socializes after the formal meeting; Below: Members in a light moment.

ORSP Observes National Energy Week

By Alleli Domingo

Coinciding with the Energy Week celebration, the third ORSP Technical Forum held December 9 at the Seminar Room of the National Engineering Center of the University of the Philippines focused on energy issues. Aura Matias, ORSP Board Director, moderated the exhaustive session led by four very qualified speakers who covered energy producer, buyer, and end-user perspectives.

The first speaker was Urbano Mendiola, Head of the NAPOCOR Power Economics Group. He highlighted the usefulness of operations research at the National Power Corporation in areas such as maintenance scheduling; hydro forecast optimization; and production cost optimization, among others.

Adjunct professor of the Holy Angel University College of Engineering Edwin B. Cano presented his paper on the "Survey of Operations Research Applications in Electric Energy Systems" which he co-authored with Dhon Dungca, Chair of the Holy Angel University IE Department. Cano showed linear, integer, and dynamic programming models used in phase balancing as well as to minimize operating costs, maximize social welfare, minimize

system losses, and optimize dispatch. Vicente Sioson, manager and team leader of the Meter Process Management Manila Electric Company (MERALCO), presented a scheduling scheme for the economic purchase of energy in a competitive market. The methodology involves the use of linear programming model to minimize period energy supply cost through the optimal allocation of energy purchases from two types of market energy supply instruments - bilateral contracts and the wholesale electricity spot market.

Evaluating various energy sources for countryside electrification was presented by Ramon Angelo Tanchoco, chair of the Quantitative Methods and Information Technology of the John Gokongwei School of Management at the Ateneo de Manila University. Tanchoco presented an economic break-even model for analyzing and identifying the operating conditions under which alternative energy sources can become the preferred energy delivery option.

ORSP members and guests, who were grateful that they managed to overcome the traffic caused by the afternoon rain, participated in the lively open forum that followed.



An impressive turnout at the UP National Engineering Center, as audience listens to speakers, from top: Mendiola, Cano, Sioson, and Tanchoco

Excerpt from President Gloria Macapagal-Arroyo's Speech during the Opening Program of the APORS 7th Triennial Conference



Elise, and the other leaders of operations research in the Asia-Pacific region, ladies and gentlemen: welcome to the Philippines!

The Operations Research Society of the Philippines led by its president Elise del Rosario has done a good job in bringing together distinguished OR researchers, academicians and practitioners in the country and all over the world. I am not a stranger to operations research because when I did my PhD in economics, it was obligatory to study OR. So I am familiar with and very appreciative of your science, that's why I am here with you today. OR is the hallmark of a strong and resilient organization going through challenging times. That's why operations research is often called the science of the better.

As president of the republic, I see that governments share common optimization problems with corporations. We all need to optimize resources which means maximizing revenues, minimizing cost and increasing efficiency, to maximize customer or public services. But at the same time, the challenges to government and corporate management can also be miles apart. In government, the variables to consider are much more numerous and more important, less apparent, their magnitudes and their weights more diverse. Public decisions affect not several employees but the lives of millions of citizens. Sometimes the most efficient solution is not politically feasible.

When I was taking up operations research in school, there was an apocryphal story about San Miguel - through OR, they came up with the ideal menu for their feedstock in terms of cost and nutritional value. But the chickens didn't eat it. The teacher's point was - there are limitations to the science. In government, the correct choice technically is not always the popular one. There are times when a leader in the public realm must bear with unpopularity and stick to the right choices, for instance, fiscal reform. Will you ever find a fiscal reform acceptable to people? Nobody likes to pay taxes. The only fiscal reform they will accept with open arms is a reduction in tax payments. But most fiscal reforms require higher taxes.

And so all the more I'm glad to hear of the successful applications of operational research in other countries which helped their development. I've seen in your papers successes in endeavors such as minimizing the cost of production and transportation of agricultural produce in India. We have similar logistics challenges in the Philippines - to bring our products from Mindanao, which is our food basket, through several islands in the Visayas, to Luzon which is where sixty percent of the consumers are.

I've read about your scheduling and routing the railway network service in South Africa. We also have our railway service - from Manila up to Clark -Subic in the north, then Manila up to Bicol in the south, and then linking the two railways. And then there are the proposals for railways in the Visayas and Mindanao, and there's my own pet transport project which is the system of roll-on - roll-off ferry boats and highways from Mindanao through the islands of the Visayas to Luzon.

I'm also very glad to hear that you're able to optimize the school meal programs of Chile. We have the same issue in the Philippines. So OR could be used to answer - what feeding program is appropriate for which schools, or, instead, should we give rice to the children when they go to school so they

can bring it home to their parents? And given the budget available for that, how do we distribute this kind of program within the country?

I'm glad to hear that your operations research has been able to predict the grain output in China. And indeed, we do need to make predictions such as that in our own country planning.

So, therefore, I'm sure that OR practitioners can do similar work in our country as well as you've been able to do in some of these other countries which will be part of your best practices sharing in this conference.

And I am certainly glad to hear - I heard about it even when I was a senator - of the pro-bono work that ORSP, through its committee for public service, has done for the government. Your continuing help will increase transparency, efficiency and improve service delivery to the public. I commend your significant role both in enterprise and nation building.

Where else can you help? When I was a senator and I spoke before the ORSP, I wondered out loud if OR could help solve our traffic problem. And that's when you said, "Of course, there's a UP study and the ORSP public service committee would like to help." So now that I'm president, I'm not just wondering out loud, I'm inviting you to help us in our traffic management.

With OR, the Bureau of Internal Revenue and the Customs can leverage innovative approaches to hike revenues and put to justice tax cheats and smugglers.

Indeed, you are the analysts that can make our road maps and operational plans feasible. And as you have this important conference of the Asia-Pacific region in the Philippines, I bid you more power as you continue to raise the standards of your profession. I look forward to your support in making our government programs work successfully and effectively.

Building the Nation the O.R. Way

By: Anais Silvestre, President, ORSP Student Chapters Federation President

With the theme “Building the Nation, the OR way - Strategies for Progress,” the Federation of ORSP Student Chapters sponsored the traditional annual full-day Student Congress that proved to be an enriching experience for all the participants.

March 11, 2006 saw the U.P. N.I.S.M.Ed in Diliman abuzz with around 350 students from the various schools. The event started promptly with the Invocation led by Genelyn Villanueva and the National Anthem, by Aryan Matawaran. The ORSP Board Director in charge of Student Affairs, Rex Robielos, opened the session with brief but energetic remarks, followed by two entertaining Audio - Visual Presentations by way of introducing the O.R.S.P. Student Chapter - organizers. The students were then shown a video of the Opening speech of Her Excellency, President Gloria Macapagal Arroyo, during the 7th Conference of A.P.O.R.S. This provided an opportunity for those who were not able to attend the regional conference to learn of the challenges posed to OR workers by the President of the Philippines.

This video showing was appropriately followed by the speech of the ORSP President, Elise del Rosario, who congratulated the students for their selection of the Conference theme, which, according to her, indicates the students' concern for their country even as they struggle with their personal anxieties of landing a job after graduation. In her talk, she contrasted the history and the difference between OR in the private and public sectors, and how OR has helped in development issues. She related her personal experience in her pro-bono work with the ORSP Corps and shared her observations about the differences to expect when using OR in the private and public sectors. Before ending her talk, she drew on her vast experience to advise would-be OR professionals on the requirements of a

good OR worker. Next came the student presentations of their technical papers, which consisted of two application projects from U.P. Diliman. “An O.R. Study on the Allocation of Relief Provisions for Tropical Natural Disasters” presented by Jeremiah Ty was followed by “Reducing the Cost of Installation of Fire Alarm Systems: An O.R. Approach” presented by Raymond Lu.

As scheduled, the whole afternoon was devoted to the Quiz, where a total of seven schools, namely: Ateneo de Manila University, Colegio de San Juan de Letran – Calamba, Da La Salle University, Mapua Institute of Technology, University of the Philippines – Diliman, University of the Philippines – Los Baños and Univeristy of Santo Tomas, competed.

A song number from the UP Concert Chorus and trivia sessions provided the welcome break throughout the activity. Delegates from Bulacan State and Adamson University were also adequately represented. Given that everything proceeded as “optimally” as planned, the event can truly be declared as another win for the Operations Research Society of the Philippines.

The event was sponsored by APM Agri-com, Inc.; KFC Philippines; Petron Corporation and the UP Diliman Concert Chorus, and of course, the ORSP.



Student Congress organizers take time out for a photo.

Wanted: 2007 Student Paper Submissions

Every year, ORSP recognizes the best student papers in OR applications. Despite the adjustment of the deadline for paper submissions for this year's competition, the office received only two papers, which came from UP Diliman. Due to the lack of entries, the ORSP Board decided to cancel the contest. However, in recognition of the submissions, ORSP encouraged the students to share their work with other participants of the Student Congress.

Both entries were interesting and relevant applications of OR. The first, entitled “An Operations Research Study on the Optimal Allocation of Relief Provisions for Tropical Natural Disasters,” by Gomez, Laguitao, Silvestre, and Ty, selects the optimal packing of relief goods considering basic health requirements of victims of natural disasters. By linear programming modeling, they determined that the allocations should be rice, sardines, and pork & beans in the ratio of 9:3:2. The second entry, entitled “Reducing the Cost of Installation of Fire Alarm Systems: An Operations Research Approach,” by Gadong, Ereno, Lovino, and Lu aims to reduce installation costs of fire alarm systems by minimizing total wire length. They devised a two-step algorithm consisting of a graphical part wherein coverage zones are determined, followed by a linear program to minimize total wire length between alarm connections, and applied their method to an actual floor plan of a building.

Even though the competitive element was absent, the student presentations were well prepared, enthusiastic, and animated.

This is a call for all qualified students and their advisers to start preparing their entries to the 2007 Paper Writing Competition.

UP Captures the Championship After Long Drought by Richard Li, Quizmaster

The Ateneo team, defending champions for the past several years, began the competition on fire by answering the first three questions correctly to jump into an early lead. Letran managed to stay close behind Ateneo by hurdling two out of the first three questions. As Ateneo and Letran failed to correctly answer most, if not all, of the remaining questions in the first round, the De La Salle team came to life on the fifth and eighth questions by being the only school to correctly answer a difficult and moderate problem on Linear Programming. UP -Diliman started its chase on the second half of the first round by correctly answering the 12th and 14th questions on Integer Linear Programming and Probability. This enabled UP -Diliman to end the first round at the top spot with 70 points followed by De La Salle and Ateneo with 60 and 50 apiece.

The top three schools at the end of the first round continued their dominance in the second round by answering at least 6 out of the 15 questions for that round. After the 14th question of the second round, UP -Diliman maintained its top spot with 210 points, followed by De La Salle with 180 and Ateneo with 160. The last question was where all the excitement began. UP -Diliman had to answer the question correctly to assure itself of first place; De La Salle had to answer the question correctly to have a chance to tie UP -Diliman for first; and Ateneo had to answer the question correctly to have a chance for second place. When the judges announced that no team got the correct answer, UP -Diliman students jumped out of their seats to celebrate the apparent victory. However, the De La Salle team launched a protest. UP-Diliman and Ateneo also launched a protest. The issue with Ateneo was settled immediately but the judges had to take time to

deliberate on the protest of UP Diliman and De La Salle. The last question was intended to be an Integer Linear Programming formulation problem. However, the question did not specify that a linear formulation was required. De La Salle presented an equivalent non-linear integer programming formulation. UP -Diliman, on the other hand, presented the correct integer linear programming formulation but failed to define the binary variables used in the formulation. After at least 20 minutes, the judges finally decided to consider De La Salle's answer while maintaining their initial decision on UP-Diliman's answer. When the judges announced their decision, the De La Salle supporters were ecstatic at their school's chance of becoming the quiz champion.

At 5:30 pm, the competition was just beginning the sudden death questions phase. After six questions, there was no winner in sight. UP -Diliman finally got the correct answer to the seventh tie-breaking question and was thus declared the champion. The quizmaster and board of judges could not but let out a collective sigh of relief, what with only one question remaining in the envelope. The contest and awarding ceremonies ended at 6 pm, with the following going home with their medals: First place - UP's Daniel Cortez, Denis Cagape, Abigail dela Cruz, Raymond Lu, and Rizza Patawaran; Second place- De La Salle's Joseph Yuhico, Charlie Sy, Jan Denis Sy, Dexter Tan and Kris Ting; and ADMU's Madeliene Paula Chan, Jean Abigail Bendicion, Natasha Iza Fernandez, Mark Robert Uy and Ryan Chua.

The O.R. Quiz was the only event scheduled for the afternoon of the Student Congress and started right after lunch, with Ateneo de Manila, De La Salle -Manila, Letran, Mapua,

UP-Diliman, UP-Los Banos and UST participating.



Nismed Auditorium "orchestra" seats were full.



The stage is set for the competition



Defending champion Ateneo gets ready



La Salle struts its stuff



Eventual winner UP shows off trophy

ORSP Christmas: Games, Songs, Food and Dancing *by Malu de Guzman U*

ORSP celebrated Christmas 2005 on December 9 right after the 3rd ORSP Technical Forum. After the full three-hour session, the members let their hair down and adjourned to the venue next to the seminar room at the National Engineering Center. After all the work prior to and during the Forum, the attendees were raring to relax and surrender to the celebration that lay ahead. They were greeted with a generous buffet, Christmas music, and holiday décor. With the tables joined to form one large group table, the Christmas atmosphere of camaraderie and sharing was complete.

Conversation flowed freely during dinner. There was ample opportunity to meet new members and get updates from the old ones. Then it was time for games and merriment. The first game had everyone clapping, *literally*! Games master Alleli Domingo had to explain the clapping sequence repeatedly and allow several rounds of practice before the game could start. Even then, it still left quite a few participants perplexed to no end! Luckily, this did not detract from everyone's enjoyment gauging from the laughter that followed every round.

The next game involved singing, thus was either welcomed with excitement or dismay depending on the individual participant. Girls against guys, with Agnes Perez as judge, the game required singing as many songs containing a given word. At each round, the team that sang more songs (only the line with the word is required) got a point. This game revealed so much of the participants from the obvious, i.e., singing talent (or lack of it!), to the subtle, i.e., taste in music and age group!

The last game was a relay game in which members of a team had to pass a lifesaver candy through a toothpick. Sounds easy, until you hear that the toothpick is stuck in one's mouth! As one can imagine, this required much concentration (controlling one's laughter), fine motor dexterity of facial muscles (keeping the toothpick in place while balancing the lifesaver), flexibility of the torso (bending at varying degrees in all possible directions), and of course, a total lack of disregard for poise!



The night was capped by a surprise -all were invited (or ordered!) to stand up and dance! This announcement again generated much excitement or much dismay in different sections of the room,

and it took a while (and a lot of prodding) to form the male and female lines on the dance floor. New ORSP member Rozano Santos, partnered by the graceful Alleli, led everyone through a few basic steps, a few hip and hand movements, some turns, and line dancing took off in earnest. For most, it was a thoroughly different but refreshing experience... allowing them to see each other in a different light. Picture taking followed, the severity of the group pose livened by the novel use of Christmas décor as bouquets for the ladies.

A great night... everyone undoubtedly contributed in making the Christmas party a success. Hope to see all you members in the next Christmas party!

Special Joint Issue: The Philippine Journal of Operations Research (PJOR) and The Philippine Institute of Industrial Engineering (PIIE) Journal

CALL FOR PAPERS

Topic 1 : Applications of LP and ILP in the Philippines: Modeling and Solution Methodologies

Various LP and ILP applications have already been demonstrated in the field of Logistics and Distribution, Supply Chain, Scheduling, Facility Planning and Design, Information Technology, and many more. In addition, special applications of LP such as Data Envelopment Analysis, Pattern Classification, Cluster Analysis, and Prediction have been developed.

This special issue would accept paper submissions covering the various uses of LP and ILP in the context of the Philippine scenario. Papers should describe original work and should utilize actual Philippine data.

Topic 2 : Applications of Systems Thinking and System Dynamics in the Philippines: Modeling and Analysis

System Dynamics is a concept started by Prof. Jay Forrester from the Massachusetts Institute of Technology, USA in 1956. System dynamics is a methodology for modeling and analyzing complex systems typically found in business and other social systems.

This special issue would accept paper submissions using System Dynamics and/or Systems Thinking in the following fields, but not limited to, Manufacturing Strategies, Supply Chain Management, Government Policy Making, and Socio Economic issues in the context of the Philippine scenario. Submitted papers should describe original work and should utilize actual Philippine data.

Submission of papers: December 2006

Procedure:

Send an electronic copy of the paper, along with a cover letter, to Dennis T. Beng Hui (benghui@dlsu.edu.ph). Word or OpenOffice.org formats are acceptable. All figures must also be supplied in original file format (ex., .jpg, .eps, .tif, .png, etc.). Full papers: 15 printed pages

Formatting

1. Electronic submission only
2. All these elements in this order: title, authors with institutional affiliations, abstract, keyword list, body, short author bios with email contact info, references, and endnotes (if any).
3. APA style references
4. Endnotes for comments only, not citations. No footnotes at all.
5. All tables and figures must be on separate pages at the end, numbered and with captions. In the text, all tables and figures must be referred to and all must have call-outs ("[Figure 1 about here]").
6. All figures must also be supplied in original file format (ex., .jpg, .eps, .tif, etc.).
7. If the lead author is Juan Dela Cruz, the main manuscript filename should be delacruz.doc.
8. Everything must be double-spaced, even references, except tables are not double-spaced

Welcome to ORSP!

An increasing number of organizations are becoming more aware of OR, judging from the profile of the twelve most recent additions to the ORSP family. They will be inducted during the upcoming June 21 General Assembly meeting.

Coming from the industry sector are: **Catherine C. Chui**, Analyst, Operation Research Department of KFC – Mister Donut Philippines; **Fernando G. Oconer**, Technical Sales Manager, Ingasco Incorporated and **Nelson C. Bool**, manager at Bangko Sentral ng Pilipinas.

From the academe, ORSP welcomes **Ralph A. Ante**, faculty member at the Ateneo Graduate School of Business; **Nancy L. Eleria**, assistant Vice Rector for Academic Affairs, General Education Curriculum at the University of Sto. Tomas; **Zeny J. Lontoc**, program director for IE at FEU – East Asia College; **Romulo G. Pizaña**, Instructor at the University of the Philippines Extension Program in Pampanga; **Rozano L. Santos**, Instructor 1, Mathematics Department, University of the Philippines –Diliman; **Ma. Linda C. Cabillan**, faculty member at Saint Louis University, Baguio City; and **Almaceley S. Plando**, assistant Professor IV for Industrial

Engineering Department at Eastern Visayas State University, Tacloban City.



Rozano Santos



Catherine Chui



Almaceley Plando



Fernando Oconer



Nelson Bool



Nancy Eleria



Romulo Pizaña



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ORSP Prepares for 20th Year Celebration

Next year mark the 20th year of the founding of the ORSP. It will be twenty eventful years since a group of OR professionals, seeking to spearhead the development and promotion of OR/MS in the Philippines, banded together and formed the ORSP.

The Society's story started in December 1986 when, at the initiative of the SMC OR Department, a testimonial dinner called "A Toast to OR Professionals" was held at SMC's Andres Soriano Executive Center. The event generated an enthusiastic exchange of ideas and culminated in the formation of a working committee tasked to define the organization that was to be the OR Society of the Philippines.

The committee was composed of Dr. William Torres of DAP, Dr. Rolando Danao of UP, Elise del Rosario and Diosdado Engbino of SMC, Dr. Roberto Padua of De La Salle, and Dr. Arthur de Guia of Colgate - Palmolive. On February 20, 1987, the committee presented the Constitution and By-Laws for approval by the initial batch of some 50 members, and the ORSP formally came into being. Dr. Torres was elected the first President, while Del Rosario succeeded him a year later.

The following have served the society as President: William Torres (1987 - 88), Elise del Rosario (1988 -90), Felipe Fondevilla (1988 -1991), Manuel Agustin (1992 -94), Olegario Villoria, Jr. (1994-96), Elvira Zamora (1996-97), Aura Matias (1997 -98), Emmanuel Macalalag (1998 -99), Wilson Wy Tiu (1999 -2000), Dennis Beng Hui (2000 -01), JC Mercado (2001-02), Vic Reventar (2002 -04), Elise del Rosario (2004-06).

The Board is inviting members to join the 20th anniversary committee that is tasked with planning the celebration. Please contact the ORSP office.