

ORSP NEWSLETTER

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Environmental Issues Discussed at Natural Resources Management Forum

In recognition of pressing environmental issues, ORSP selected Natural Resources Management as the theme of its Technical Forum held on Saturday, July 28, 2007 at the Audio-Visual room of the NEC at the UP Diliman campus. Conducted in cooperation with the National Engineering Center, it featured respected authorities from the government and the academic community.

Environmental Education and Information Division Chief of the Environmental Management Bureau of the Department of Environment and Natural Resources (DENR) and chair of the Sub-Committee on Information and Education of the Philippine Council for Sustainable Development **Elenida del Rosario-Basug** discussed government education efforts in her presentation entitled "*The National Environmental Education Plan (NEEAP) for Sustainable Development.*" She introduced the NEEAP vision for environmentally-literate and proactive citizenry imbued with a sense of responsibility to

care, protect and enhance environmental quality. She discussed how this vision requires educating all Filipinos from their earliest years both at home and in school, and the accompanying effort in curriculum and educational resources development, conferences, community involvement, and social advocacy. Status of the efforts were also tackled.

Taking off from this discussion, the next speaker, ORSP President **Alleli Domingo**, related how OR education has responded to the environmental management challenge through several examples. She introduced "*Earth-keeping Awareness thru Operations Research Models,*" with an award-winning song which reminds us that we are all "earth-keepers" and as such, are accountable for the proper use and preservation of the natural resources that have been given to us. She

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Natural Resources Forum speakers:(L to R): Diomedes Racelis, Rhodora Gonzales,Elenida Basug with ORSP's VP Elise Del Rosario, Pres. Alleli Domingo, Sec Malu De Guzman U and Director Aura Matias

NEDA Chief Keynotes National Conference on ORSP's 20th year

by Anna Siriban Manalang,



Members listen intently to the plenary talks.

Makati Shangri-La's Quezon Ballroom was all a-buzz last February 16, 2007 as the collective energy and enthusiasm of some 250 participants filled its walls. On stage was the celebration of ORSP's 20th Anniversary and its 2nd National OR Conference.

The conference brought together the country's top OR/MS practitioners, academicians, functional managers, enthusiasts from all over the country along with students from Ateneo de Manila, Colegio de San Juan de Letran, De La Salle University, Mapua Institute of Technology, University of the Philippines Diliman and Los Baños.

Opening ceremonies highlighted the role of OR in governance and the state of OR education in the Philippines. The day also featured keynote speeches and panel discussions featuring past ORSP Presidents along with paper presentations. Oath takings and a fellowship cocktails get-together capped the event.

Elise del Rosario, ORSP founding member and outgoing president, and president of the International Federation of OR Societies (IFORS), formally opened the conference with a speech that gave

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Environmental Issues ...

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then discussed the role of quantitative reasoning in enabling people to think broadly and across disciplines.

The usual applications of OR in the minimization of costs and maximization of profits must be expanded to evaluate economic gains against the standard of long-term sustainability. She presented a survey of mathematical models that take their cue from nature, notably, ant colonies and flights of sea gulls. She also shared teaching practices that stir consciousness of students as earth-keepers.

Dr. Diomedes Racelis' presentation on "Simulation Modeling Applications in Reforestation in the Philippines" caught everyone's attention with the projection that if deforestation continues at its current rate, old-growth forests will disappear in ten years. An Associate Dean and Associate Professor at the College of Forestry and Natural Resources in UP Los Baños and recipient of UPLB Outstanding Teacher Award for Physical and Mathematical Sciences as well as the UPLB College of Forestry Outstanding Teacher Award, he discussed how simulation has been, and may be used in modeling the numerous and oftentimes conflicting considerations (geographical, economic, political, etc.) in forestry. He went into the details of a simulation model that helps optimize reforestation efforts. He ended by citing the advantages and disadvantages of using simulation modeling, and identified the major contributions of these models in the reforestation efforts.

After the snack, the audience was all set for another informative presentation on soft systems methodology as used in "Platforms & Terraces: Bridging Participation and Geographic Information Systems in Watershed Management with the Ifugaos" for presentation by **Dr. Rhodora Gonzalez**, Chairperson of the Department of Geodetic Engineering, Director of the Training Center for Applied Geodesy and Photogrammetry at UP Diliman. Lightning struck, and it knocked out the power at the Auditorium. After some minutes of waiting, the organizers thought it optimal to re-schedule the presentation for the next forum. The speaker graciously accepted the organizers' apologies with a promise to be at the next forum. ♦

NEDA Chief...

Continued from front page



Pres Del Rosario and Organizing Committee

emphasis to the application of OR in the local private and public sectors for global competitiveness and better decision-making. She also touched on the ORSP pioneering activities to educate teachers and encourage students through the student chapters. Even as she mentioned that ORSP is the youngest OR society in the Asia-Pacific region, she exhorted the audience to focus on its goals and maintain its dynamism as it welcomes its next 20 years.

Dr. Catherine Quimpo-Castaneda, Director for Plans and Programs of the Commission on Higher Education, in a speech entitled "The State of OR, Engineering & Technology Education in the Philippines", discussed the process of identifying the priority courses that will contribute significantly to society. She highlighted the establishment of Centers of Excellence (COE) and Centers of Development (COD) to set the standard for educational institutions in the country, and the accreditation of all of the learning institutions in the country. She mentioned that the Philippines indeed has a competitive edge in nursing. She is convinced that OR must be integrated into

the mainstream curriculum of schools.

Socio-Economic Planning Secretary and NEDA Director General Romulo L. Neri keynoted the 2007 ORSP National Conference and 20th anniversary celebration as he expertly expounded on his insights on a presentation entitled "Inputs for the Reform Agenda". He typified the national economy dynamics through the elephant system model, with analogies to investments / savings as the elephant's front legs; monetary / fiscal policy as its hind legs, exports as the feed for the system, imports as exits out of the system, the GNP /GDP as the body and the foreign exchange rate as its ears that regulate the temperature of the economy. ♦



Socio-Economic Planning Secretary and NEDA Director General Romulo Neri encourages members to use OR for development



Dr. Catherine Quimpo-Castañeda, Director for Plans and Programs of the Commission on Higher Education discusses Centers of Excellence



Nat Res Mgt Forum speakers in action: Elenida Basug, Alleli Domingo and Diomedes Racelis

ORSP: The First 20 Years

It all started on the fortuitous month of December in 1986 when the San Miguel Corporation's OR Department initiated a testimonial dinner, "A Toast to OR Professionals", which was held at the SMC 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 Operations Research Society of the Philippines. In February 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. Since then, ORSP has been at the forefront of promoting the advancement and practice of OR in the Philippines.

The first ORSP symposium was held in June 1987 and featured OR applications in various sectors where both local and foreign experts have presented papers before the ORSP membership. This symposium became a regular event of the society in its drive to focus on the vast potential of OR/MS in the Philippines.

To discuss pertinent issues and new directions for development, the annual ORSP General Membership Meeting was created. Top government officials, including then-Defense Secretary Fidel Ramos and then-Senator Gloria Macapagal-Arroyo, have graced the Society's biennial induction of officers. ORSP highlighted OR in the public sector through its regular Kapihan forums sponsored by the Department of Science and Technology.

Early on, ORSP recognized the role of students in the advancement and development of OR. In 1989, ORSP formed its first Student Chapter which had grown to

eleven under the Federation of Student Chapters. The Federation actively sponsors gatherings and an annual Student Congress which features lectures, the Inter-University OR Quiz and a Paper Writing Contest.

After only four years from its inception, the ORSP rose to the challenge of hosting the first International Conference on OR/MS (ICORMS) in December of 1990. At about the same time, the first issue of the Philippine Journal of Operations Research was published. Seven years after, ORSP hosted the second ICORMS, conducted jointly with the IFORS' annual International Conference on OR in Development (ICORD). These were followed by another international event organized by ORSP, IFORS Workshop for Teachers in Developing Countries, in July 2004.

In the centennial year of 1999, the ORSP Committee on OR for Public Service (ORSP Corps) was established in line with its long-term mission of advancing the role of OR in nation-building. It has, since then, completed five projects, on: Privatization of the Manila North Harbor, Assessment of the Bureau of Customs shift to the Transaction Value System, Assessment and Streamlining of the Data Capture at the Bureau of Customs, Selection and Deployment of Quick Count Facilities for Namfrel, and Optimization of Power Dispatch in the Luzon Grid for the National Power Corporation.

As a fitting cap to its 20th year, ORSP has produced the first lady President of the International Federation of OR Societies (IFORS), an organization comprising of 45 national societies, in the person of one of its founders, Elise del Rosario. ♦



Induction 1987

1987: Gem Carague with first set of directors: Bill Torres, Elise del Rosario, Nida Africa, Art de Guia, Bert Navarette, Bobby Padda, Dado Engbino, and Lem Miravalles



Induction 2007

2007: Usec Fortunato de la Peña with 2007 set of directors: Dennis Beng Hui, Elise del Rosario, Alleli Domingo, Aura Matias, Malu de Guzman U, Rex Robielos, Agnes Perez, Bob Baylon and Romulo Pizaña.

President's Corner...

SHARED SERVANT LEADERSHIP

Alleli C. Domingo



What is peculiar about the ORSP Presidency is that although it is the highest organizational post, it is not coveted by any member of the Board of Directors. Prospective presidents already have their plates full of significant endeavors demanding attention: book-writing, administering, consulting, teaching, mentoring, coordinating projects, fostering the growth of organizations and continuing education, among others. We reluctantly accept the reasons for their saying no to the ORSP Presidency as valid.

But we can only say no so many times before guilt devours us or fate paves the way and we are left with no choice but to say no to no. Inevitably, the matter comes no longer an option but an obligation. It is deemed necessary to release past ORSP President Elise del Rosario from her commitment to a hold-over position so she can attend to her duties as the first woman, first Asian President of the International Federation of Operations Research Societies. We consider that as our national society's contribution to the expanding international community of OR experts, practitioners and enthusiasts.

After saying no to no, there still remains a residue of reluctance and a lingering sense of uncertainty. We are all keenly aware of the stature and achievements of past ORSP presidents. There is pressure from all over, but the greatest of all is the pressure from within, a personal challenge for an impersonal goal. We cannot afford to let twenty solid years of outstanding results of OR utilization degenerate. So, hinging everything on the audacity of hope and the love of OR, we lie prone at the altar of service. As we take the first tentative steps, the uncertainty fades and we realize that the leadership is shared by supportive, competent allies who collectively devote their energies to the role of nation-building.

We strongly urge the country and the global community to say no to no and to take part in the journey of OR. ♦

STUDENT CHAPTERS

Student Congress 2007: Engineering The Future Risk Management, the OR Way

Armstrong Lee, Samantha Vy & Nikki Yu



Reventar Shows OR Ways to Manage Risk

Past ORSP President Vicente Reventar was the featured speaker of the 2007 Student Congress. Representing the Mother Chapter, he shared his expertise on risk management, specifically, portfolio management and the Markowitz Model.

The speaker had the student chapter members listening to him intently. After his talk, the contestants for the Paper Writing Competition were up next. Three teams from La Salle and two from UP Diliman were grilled on their methodologies and formulations. After lunch was the afternoon-long battle for the coveted OR Quiz Bee championship. ♦



Board Director in charge of Student Chapters Rex Robielos pose with the ORSP Student Chapter Federation Officers

UP Diliman Team Bags OR Paper Competition

Heading the Board of Judges, Dr. Maria Lourdes de Guzman U, together with Chona Y. Amanca and Francis Z, Miranda proclaimed the UP Diliman entry as the winner of this year's Annual Student Paper Competition.

The best student Paper awardees were Levy Borromeo, Mildred Panergo and Trixie Tolentino, who discussed a methodology for assigning and scheduling salesmen in their paper, "A Dynamic Programming Based Model for the Optimal Deployment of Medical Representatives."

The finalist papers were Charlie Sy and Jerico del Rosario's "Use of Discrete-Event Simulation to Evaluate an Inventory Policy for Perishable Items," Karissa Chavez, and Jameson Julian Tanliao's "A

Dynamic Programming Model for Determining Optimal Routes Applied to a Distribution Company," Dianne C. Francisco, Karen Anne G. Leaño and Mark Dennis C. Miranda's "An Integer to Programming Model for Optimal Tank Assignments of Multiple Sources and Destinations of Fluid Materials" and Patricia Rovie Quadra, Dhesirey Beryl Sio, Miguel Anton Suarez, Matha Lauren Tan and Emilie Tirona's "An Integer-Linear Programming Approach to School Bus Routing in a Philippine Setting."

Judge Amanca is Executive Assistant to the President of Philippine Batteries, Inc. On the other hand, Miranda is the Supply Chain Systems Manager of Zuellig Pharma. ♦

DLSU Taft is 2007 Quiz Bee Champion



Judges Dennis Cruz, Alleli Domingo and Malou De Guzman U try to settle a question.

Contestants from Adamson University, Ateneo de Manila University, De La Salle University, Letran College - Calamba, Mapua Institute of Technology, University of the Philippines-Diliman, University of the Philippines-Los Baños, University of Santo Tomas, and Tarlac State University battled it out in two rounds of intense competition consisting of easy, moderate, and difficult OR-related questions during the OR Quiz Bee.

In the first round, DLSU and ADMU breathed down each others' necks. However, DLSU later pulled away by a big lead. Medals and trophies were awarded to the winners:

The *Over-all Championship* was awarded to De La Salle University Taft team members Alvin Chua, Raymund Cuesico, Al-

ben Ngo, Charlie Sy, Dennis Sy and coaches Bryan Gobaco and Dennis Beng Hui. *First Runner Up* Ateneo de Manila University made it with the team of Anton Bautista, Ryan Jerome Chua, Clark Cue, Karlvin Ong and Mark Robert Uy and coach Mr. Alyson Yap. University of the Philippines Diliman team made up of Philip Revo de Guzman, Francis Giancarlo Lee, Raymund Daniel Lu, Ma. Rizza Patawaran, Jameson Julian Tanliao capped the *Second Runner Up* award. ♦



Beaming with pride, Quiz champions pose with coaches and judges.

STUDENT CHAPTERS



Judges facing a tough decision on paper competition: (L to R) Chona Amanca, Francis Miranda and Malu De Guzman U

Student Impressions:

ORSP 20th Anniversary Conference

"Such gathering of OR practitioners and enthusiasts is helpful to students like us; at least now, when someone asks me what my job would be after I obtain my degree, I could give more specific answers, based on the profile of speakers and participants I met in the OR conference."

-Reann C. Ferrer

"It was my first time to attend an ORSP National Conference. I do hope that I can participate in the next national conference of the ORSP. I wish there will be a workshop so that it will be more interactive for all the participants in the seminar."

-Rey Bryan M. Cubero

"The participation was great during the panel discussion of OR in Education: the Philippine Setting. It was there that our professors showed and proved how dedicated they are in teaching OR. The conference reminded us of our role in the future of OR in the country and in the whole world."

-Homer N. Cruzado

"The speakers were very knowledgeable in their fields of expertise. I was impressed by the extent of the OR applications presented in the panel discussions and parallel sessions. I was challenged to solve problems the OR way. The conference gave me an overview of what I can become in the future."

- Carl Vincent C. Carbonera

"The conference enlightened us on the diverse applications of OR - on banking, land use, scheduling of doctors, chicken-cutting, delivery, among others."

-Michael Kelvin N. Junos

"I was enriched by what I learned from the speakers in the plenary and parallel sessions. I can not describe the sense of fulfillment that overwhelmed me."

-Keith A. delos Santos

Forum Features the Future

Amid the natural calamity that befell the natural resources forum, ORSP went on with the presentation of the students who make up the future of OR in the Philippines. The light streaming in from the auditorium windows served as a unique backdrop for the leaders and advisers of the student chapters who spoke, in turn about their club activities. The semi-darkness did not dampen, but rather highlighted, the enthusiasm of the future OR leaders who took the stage and received their certificates of student chapter membership from ORSP President Alleli Domingo.

mingo.

ORSP's Vice-President and Forum emcee Elise del Rosario then went on with the presentation of the student chapter certificates. The forum was opened by past ORSP President and past NEC Director Aura Matias. Capping the program was ORSP Secretary Malu de Guzman U who provided the highlights of the talks and invited all those present- guests, ORSP members and student federation members - to join future ORSP activities. ♦

On hand to receive their certificates of student chapter membership were representatives of: UP Diliman, Adamson Univ., DLSU Lipa, Mapua, UPLB, DLSU Taft and Tarlac State University Letran, Ateneo and UST got their certificates after the event.



INTERNATIONAL NEWS

Philippines Participates in Prague OR Conference

ORSP VP **Elise del Rosario**, along with six faculty members of the UST kept the Philippine flag flying during the 22nd European Conference held in Prague from July 8 to 11.

With the theme "OR Creates Bridges", the conference showcased how OR can combine, connect and tie together topics that touch everyone in the world. Of course, the other significance of the theme is that bridges are very characteristic of Prague, with the first and foremost being the Charles Bridge.

Del Rosario presided over the first face-to-face meeting of the International Federation of OR Societies (IFORS) Administrative Committee. In the plenary session, she also introduced IFORS Distinguished Lecturer **Robert Bixby**, the Chief Scientific Officer of ILOG, and developer of CPLEX.



Posadas, Cabanda, Abara, Calara and Castaño pose after presenting their papers.

Meanwhile, the UST contingent presented papers on Data Envelopment Analysis, as follows: **Jovita Abara** on "Multi-Stage and Malmquist DEA as a Measurement of Progress in the Agricultural Sector in Asia", **Emilyn Cabanda** on "Using DEA to Evaluate Efficiency of Telecommunication Firms in the Philippines"; **Maria**



Speakers prepare for the plenary session (L to R): Bob Bixby, Luke Van Wassenhove, Joseph Jablonsky and Del Rosario

Socorro Calara on "Comparative Efficiency Performance of Philippine Cooperatives Using Financial Ratios and DEA"; **Mary Caroline Castano**, on "Measuring Productivity for State and Private Educational Institutions in the Philippines"; **Elvira Crudo** on "Performance of Selected Government Corporations in the Philippines"; **Imelda Dorado**, on "Measuring Technical Efficiency of Philippine Social Foundations: A DEA Approach"; and **Ramon Posadas**, on "Technical Efficiency of Electricity Distribution Cooperatives: Evidence From the Philippines."

The meeting attracted some 2,064 participants from 77 countries. There were 1,710 paper presentations arranged in the following streams: Agent-Based Modelling; Analytic Hierarchy Process, Analytic Network Process; Closed-Loop Supply Chains; Combinatorial Optimisation; Computational and Artificial Intelligence; Computational Biology, Bioinformatics and Medicine; Continuous Optimisation and Control; Convex Optimisation: Theory and Algorithms; Cooperative Games; Cutting and Packing; Data Mining and Knowledge Discovery; DEA, Decision

Analysis, Discrete Optimal Control; Dynamic Programming; Dynamical Systems and Game Theory; Economic Modeling and Optimal Control; Electricity Markets; Energy and Environment; Energy Markets and Sustainable Modeling; Environmental Analysis; Facilitated Problem Structuring; Financial Modelling and Risk Management; Financial Optimisation and Risk Management in Public Debt Analysis; Forecasting; Fuzzy Modelling; Fuzzy Optimisation; Game Theory, Mathematical Economics; Geographic Information Management; Global Optimisation; Graphs and Networks, Scheduling and Location; Integrated Supply and Demand Management; Inventory Management; Knowledge Management; Linear and Conic Optimisation; Locational Analysis; Machine Learning and Optimisation; Manufacturing and Warehousing; Mathematical Programming; Metaheuristics; Methodology of Societal Complexity; Multi Objective Optimisation; Multiple Criteria Decision Analysis, Noncooperative games; Nonlinear Programming; Optimisation Software; OR and Strategy; OR and Ethics; OR Education, OR for Development; OR Games; OR in Agriculture and Forest Management; OR in Health Care and Society; OR in Industries; OR in Marketing; Population Dynamics, Oscillation Theory and Applications; Power Indices; Production Management and Supply Chain Management; Project Management and Scheduling; Revenue Management; Simulation and Stochastic Programming and Modeling; Stochastic Programming; System Dynamics Modelling; Timetabling and Rostering; Transportation and Logistics; Variational Inequalities and Bi-Level Problems; and lastly, Vector and Set-Valued Optimisation. . ♦

Japan Celebrates 50th Anniversary

The Operations Research Society of Japan (ORSJ) celebrated its 50th anniversary during its national fall conference from September 26 to 28, 2007 at the National Graduate Institute for Policy Studies (GRIPS) in Tokyo. IFORS President Elise del Rosario was present to extend IFORS congratulations to all the members. With over 400 of its members



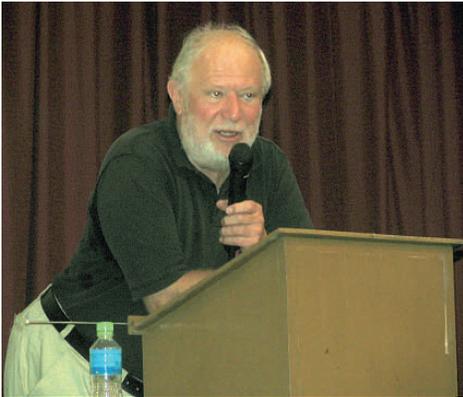
Panelists- China's Zhang, Korea's Park, IFORS' del Rosario and INFORMS' Dietrich answer questions from the audience.

in attendance, the conference featured 4 plenary talks and 125 papers in 7 parallel sessions. The plenary talks were given by Japanese luminaries from the academe, industry and political arena.

Marking its 50th year of national and international involvement in the world of Operations Research, ORSJ featured two international sessions; the foundation of the Kondo Prize; the launching of the open electronic archives of ORSJ past journals, proceedings, and the OR Dic-

Austrian OR Professor Lectures in UP Los Baños

By: Alleli Domingo



Dr. Gustav Feichtinger during the lecture

Dr. Gustav Feichtinger, full professor for Operations Research at the Vienna University of Technology, spoke on “Dynamics and Control of Deviant Behavior” on February 13, 2007 to a large audience at the New College of Arts and Sciences Auditorium University of the

Japan Celebrates...

Continued from page 6



IFORS President, Elise Del Rosario w/ ORSJ

tionary in the ORSJ website; the grant of support for the workshop organized by young researchers; and the publication of a series of textbooks on OR as well as a special journal issue.

Apart from IFORS President del Rosario, the international session had as its speakers, INFORMS President Brenda Dietrich, former Presidents of the Operations Research Society of China Xiang-Sun Zhang, and of the Korean Operations Research and Management Science Society Sung Joo Park. Jiro Kondo personally launched and awarded the Prize named after him, the Kondo Prize, to its first awardee, Toshihide Ibaraki. ♦

Philippines at Los Baños. The lecture was attended by faculty members, undergraduate and graduate students from the different colleges and institutes of UP Los Baños. The forum was jointly sponsored by the Institute of Mathematical Sciences and Physics, College of Arts and Sciences and the ORSP UPLB Student Chapter.

Feichtinger is Research Group Head of Operations Research and Non-linear Dynamical Systems (ORDYS). He leads the Population Economics Research Unit at the Vienna Institute of Demography of the Austrian Academy of Sciences. His current research activities and interests are optimal control/dynamic games in economics and nonlinear dynamic systems, respectively. During the last ten years he worked on the economics of social interactions and epidemiology as well as 'deviant' behavior which includes illicit drug consumption, corruption, violence and international terrorism. He has articles published in the Journal of Economic Dynamics and Control, Journal of Economic Theory, American Economic Review, Journal of Optimization Theory and Applications, Population Development Review and others.

Dr. Gustav Feichtinger was past president of the Austrian Society for Operations Research (ÖGOR) and is also a member of other professional organizations and institutions such as German Society for Operations Research (GOR), Institute for Operations Research and the Management Sciences (INFORMS), Austrian Society for Mathematics (ÖMG) European Society for Population Economics (ESPE), International Society for Dynamic Games (ISDG), and International Union for the Scientific Study of Population (IUSSP) ♦



Dr. Gustav Feichtinger after his talk, with UPLB's Cuaresma and wife and Alleli Domingo.

Meralco Managers Learn About OR / Business Analytics in CIO Technology Briefing



Del Rosario briefing Meralco employees.

ORSP Vice President Elise del Rosario spoke on the Value of Operations Research in Business Intelligence and Analytics (BIA) and how it can be applied to daily operations and decision-making during the Meralco CIO Technology briefing held last August 2, 2007 at the Meralco Lighthouse.

The briefing is part of the Meralco CIO program to inform its internal customers of new and emerging technologies of potential use to Meralco. CIO internal customers from Networks, Customer Retail Services listened to the speakers and exchanged ideas.

CIO's Head of ICT Management, Martin Lopez., opened the briefing. Apart from industry expert del Rosario, other speakers included representatives from two of Meralco's software partners. IBM's Earl Villanueva and Sam Siah of IBM Singapore discussed Business Intelligence Application Technologies in the market.

Oracle's Sanjay Gour presented his take on the importance of the Business Analytics project being undertaken for Meralco while Ricky Kapur of Oracle's Business Intelligence showed how BI tools can work for the Deregulated Environment. Mike Humphries of Intranet, consultant of Meralco's Data Warehouse and Meralco's Eugene Araullo presented their perspectives on Business Intelligence in the Meralco setting. ♦

The Second National Conference: A Review of Selected Sessions

The ORSP second national conference featured three plenary panel sessions and ten tracks, composed of: decision support and policy formulation, supply chain management, forecasting and data envelopment analysis, transportation and delivery, linear programming, systems dynamics, production planning, modeling, energy and a student track. A total of 30 researches were presented by 28 authors.

OR Role in Governance and Industry Panel

By: *Malu de Guzman U*

With the exception of the lone foreign guest, all speakers in this session were past ORSP officers. The speakers related their personal experiences on the use of OR tools and techniques in the government and business sectors.

JC Mercado, past ORSP President, is the owner and managing director of eCode,



Panel speakers talk on the Role of OR in Governance and Industry (top to bottom, L to R): JC Mercado, N. Ravichandran, E. Macalalag, V. Reventar and E. Pineda

Inc., and was formerly with Ramcar Food Group. His presentation entitled “OR Applications in Information Technology and Telecommunications,” discussed that OR in IT has to adapt to change while standing on its firm foundation as the world virtually becomes smaller through technology development.

Also a past President, Vic Reventar followed with his presentation, “OR in Finance and Banking.” Banks, mutual funds, and insurance companies use asset-liability models to manage their funds and their future contingent liabilities. He presented the problems and challenges of

making OR applications pervasive in this segment of the Philippine economy.

The third speaker, past ORSP President Emmanuel Macalalag, Assistant Vice-President for Business Planning and Development at Ginebra San Miguel, Inc., talked about the “OR Applications in Manufacturing” with focus on supply chain applications. He discussed methodological challenges that are part and parcel of real-world applications, and their corresponding solution approaches.

Edwin Pineda, a former ORSP Treasurer is with the economics/mathematics fac-

how, in the current realm of Philippine taxation and fiscal issues, OR/MS models have provided analysis and options for policy makers and industry.

Finally, the lone guest from overseas, N. Ravichandran of the Indian Institute of Management, presented “Models in Management Science: Issues in Implementation.” He reviewed the attempts at creating models of real life situations and its implementation. He discussed the key drivers towards successful implementation which he listed as: choice of technology and sophistication of the model; top management support; training and orientation of the middle level executives; intensity of the competitive environment; and the ensuing fear and accountability related to the new method.

All in all, the speakers demonstrated the significance of the role of OR in both private and public sectors, and emphasized that although applications draw from the same set of tools, they are continually evolving and improving with every implementation. ♦

OR in Education Panel: A Passion for Teaching

By: *Alleli Domingo*

The 20th anniversary cum national convention was a rare event where OR educators was given a chance to present and discuss the state of OR education in the Philippines.

The speakers for the panel discussion came from the leading higher education institutions of the country and are current or past officers of the ORSP. Aura Matias of the University of the Philippines Diliman highlighted the strength of the UP

ulty at the University of Asia & the Pacific. His presentation entitled “OR Applications in Policy-Making” delved into



OR Education Panel take turns discussing their school strategies on OR (L to R): Aura Matias of UP, Rex Robielos of Mapua, Alleli Domingo of UPLB, Chito Tanchoco of ADMU and Dennis Beng Hui of DLSU.

institutional linkages. Dennis Beng Hui of De La Salle University-Taft emphasized the significance of system dynamics. Alleli Domingo of the University of the Philippines Los Baños shared her philosophy of OR teaching and ways to address learning styles of students. Angelo Ramon Tanchoco, Chair of the QMIT and IT Department of the John Gokongwei School of Management, Ateneo De Manila University focused on the remarkable outcomes of their well-crafted curriculum.

Prof. Rex Aurelius Robielos of Mapua Institute of Technology dwelt on intervention measures to enhance absorption of hard OR concepts.

The formidable level of commitment of OR mentors enables them to equip young people with the skills that they need to become contributing citizens of the country and the global community. In the words of Christa McAuliffe, OR teachers touch the future, they shape the students' thinking and watch them transform into innovative leaders and mobilizers. The lives of OR mentors reflect the declaration of Dr. Josette Biyo, winner of the 2002 Intel International Science and Engineering in Teaching Fair (ISEF) Award for Excellence in Teaching, "I am happy in teaching. I benefit the most from this because I am happy. This is what keeps me going." ♦

Transportation and Delivery

by Anna Bella Siriban Manalang

Edgar Doña, DLSU professor and transport expert, presented, his paper co-authored with A. Manalang entitled A Dynamic Equilibrium Model for Expressway Toll-setting, a case study of the South Luzon Expressway (SLEX). A dynamic utility model within the context of maximum payoff criterion was developed and tested on the SLEX consisting of two segments, an at-grade section and an elevated expressway portion. The model was calibrated using relevant historical data to determine an equilibrium market share. Comparison between the calculated and the recently observed shares show a significantly high degree of prediction. The model concept presents a pragmatic approach to determining the equilibrium market share and the revenue-

maximizing toll in either closed or open toll system. ♦

System Dynamics

by Dennis Beng Hui

The three academicians featured in the System Dynamics track presented varying applications even as they all highlighted the need to critically understand system dynamics for efficient and successful implementation. Jose Edgar Mutuc of DLSU-Manila demonstrated the behavior of quality circles and how the Japanese expand their scope of work and constantly pursue problems beyond their work area through quality circles in order to attain a more sustainable approach to managing these circles.

Phares Parayno of Miriam College, on the other hand, proposed a holistic framework of analyzing the interrelationships between poverty and land degradation in developing countries, particularly the Philippines. He extended the income distribution model of Saeed (1988) to the processes affecting land quality within the agricultural system and to the processes affecting rural-urban interaction. His framework provided a better understanding of the increasing rural poverty and land degradation in the Philippines amid the general increase in income per capita and, therefore, an informed policy agenda to alleviate both problems of rural poverty and land degradation. The complete model is used to analyze past policies aimed at improving the economic and environmental conditions in the rural sector.

Finally, Vic Reventar from the Ateneo de Manila University showed through system dynamics why the current Business Process Outsourcing (BPO) activities in the Philippines are expected to approach a "Limits to Growth" situation because of high attrition rate, cost of internal training and development and employee piracy. He proposed the SD model to provide a more pro-active approach to policy design, in particular, those related to manpower development in order to ensure that

the Philippines would remain competitive in the global BPO services beyond 2010. These papers demonstrate the potential of SD models for a more holistic approach to dynamic systems. ♦

Production Planning

By: Alleli Domingo

On behalf of her co-authors Edgar Doña, Maureen Iumin and Joseph Yuhico, Anna Bella Siriban-Manalang presented the first paper in this track, "Simulating and Optimizing Safety Stock Levels and Designing a Least-Cost Production in an Ice Manufacturing System." Efficiencies for the current and proposed set-ups were evaluated and total manufacturing costs based on manpower complementation, layout configuration, incentive schema and production schedule were compared.

Ma. Antonieta Tagimacruz, presented the results of "A Simulation-Based Evaluation of the Effect of Different Scheduling Policies in a Combined Push-Pull Production System." Two types of scheduling policies were evaluated, the FIFO and the non-preemptive/preemptive scheduling policies. The conclusion were, that priority scheduling policy does not affect delayed pull orders and finished push assemblies but affects delayed push orders.

Anna Bella Siriban-Manalang, Gianpaola Abadia, Leslie Ann De Lima and Diana Marie Lonzaga jointly wrote the last paper. Optimizing Output Through Batch Size Reduction Using Simulation in A Semiconductor Company. The results, presented by Siriban-Manalang, revealed that optimum batch size would yield an increase in output which exceeded the yearly target and would generate net annual savings of about Php40M. ♦





RECAP of the ORSP 20th Anniversary and 2nd National Conference

by Romulo Pizaña

Our anniversary and national conference opened with a plenary session (panel discussion) on the Role of OR in Governance and Industry chaired by Malu De Guzman U. JC Mercado of the Telecommunications and IT sector gave a short

schools in their adherence to standards and competencies that CHED has defined.

After the parallel sessions on the papers of students and on-going research of some members of the society, the third plenary



Closing Plenary speakers on OR and ORSP— where to from here? (L to R): Bill Torres, Raul Rodriguez, Agnes Perez, Fortunato dela Pena and Nikki Yu.

review of the traditional OR methods as applied in IT and underscored the need to make adjustments with respect to the environment one may find himself in. V. Reventar of the Finance sector centered on the use of OR in Banking and Finance particularly in the management of pension funds and educational funds. E. Macalalag of the manufacturing sector mentioned the application of OR in facility planning as well as product planning and distribution. E. Pineda of the University of Asia and the Pacific briefly discussed the need to apply OR in governance, particularly in taxation. N. Ravichandran gave an insight into the ramifications of the effective application of OR in industry.

The second plenary session, chaired by Anna Siriban-Manalang, continued on with Secretary Neri's unveiling of the status of the government with respect to its reform agenda in addressing the economic needs and development of the country. He again reiterated the challenge for OR practitioners to see the possible infusion of OR analysis and methods to achieve better results in its objectives. C. Castaneda of CHED gave an inside look into the role that CHED is playing with respect to the regulation of tertiary

session was a virtual tour of the five academic institutions which carry OR in their academic programs. Prof Matias of the UP Diliman College of Engineering explained the IE-OR program. Prof Dennis Beng Hui underscored DLSU's efforts to make its OR program relevant and pragmatic so that their graduates are well-prepared. UPLB's Prof Domingo, aside from introducing the OR emphasis in their Applied Math Course, centered on interesting and creative techniques in teaching OR to the students. She further emphasized that the role of the teacher was very crucial in this endeavor. ADMU's A. Tanchoco said that OR was embedded in their management engineering program. He mentioned that the school is encouraging other disciplines to use OR analysis and methods in their fields. Lastly, Mapua's R.Robielos informed the participants that OR is now being introduced to the students and hopefully would arouse interest.

In discussions and reactions of the participants, more specifically in the closing plenary, several challenges came up. Firstly, there is a reverberating call and challenge for OR practitioners to help in the application aspects. According to E. del Rosario, there is already a group assisting the government along this line but

Night of Celebration

by Malu De Guzman U

After a long day filled with presentations, it was time for ORSP members to relax and celebrate 20 years of fellowship with hors d'oeuvres at Quezon Ballroom A. It was small and intimate gathering of friends and colleagues from different stages in the life of ORSP, marked by the formality of the induction of the newest members, some having just signed up on the day itself. Also inducted were the newly elected Board and its officers, namely Elise del Rosario as acting president, Alleli Domingo as Vice-President, Malu de Guzman U as secretary, Agnes Perez as Treasurer and Dennis Cruz, as Auditor. While enjoying delicious food and wine, ORSP members formed new ties and renewed old ones. It is heartening to note that Bill Torres and Raul Rodriguez, officers in the first five years of the society, were around to grace the closing panel. Glasses tinkling, laughter ringing in the air, the fellowship was short and sweet, a filling one to conclude an anniversary celebrations 20 years in the making. ♦



Organizers pose with Usec Fortunato dela Pena, Past President Bill Torres and ex-board member Raul Rodriguez at the cocktails.

no group assisting the private sector; Secondly, this could mean that we should continue to ask individuals to help in this project with some reasonable compensation; Thirdly, the interdisciplinary nature of OR may necessitate the creation of teams of experts for every sector being assisted; Fourth, the need to respond to the challenge of promoting OR in secondary schools, in order to introduce young minds to the field and stimulate interest; Fifth, an issue that needs to be addressed is how to professionalize the field of OR.

All in all, the day was worthwhile and inspiring for everybody. ♦

Welcome Welcome Welcome Welcome Welcome Welcome

Academe



**Marvin
Cruz**



**Ryan
Erestein**



**Ronald Aaron
Po**



**Cyrus Angelo
Selga**



**Ma. Antonieta
Tagimacruz**



**Diomedes
Racelis**



**Maureen
Valerio**



**Myrna
Carandang**

Industry



**Sandra
de Leon**



**Darlene
Fenix**



**Miranda
Macasieb**



**Oscar Pedro
Torrecampo**

ORSP welcomed twelve new individual and two institutional members for the period January to July 2007. The Institutional schools are **UP Diliman**, **Mapua Institute of Technology** and **Technological Institute of the Philippines-Quezon City**. The new representatives for UP Diliman are **Norman Lapid**, Instructor for College of Engineering & **Iris Ann Martinez**, Assistant Professor at College Engineering. Mapua's new representatives are **Catherine Crisostomo** & **Cecil Cruz**. TIP-QC representatives are **Rosalia Gabuya** and **Jaypy Tenerife**

From the academe, ORSP welcomes **Myrna Carandang**, Associate Professor for Institute of Renewable Natural Resources at the UP Los Baños; **Marvin M. Cruz**, an Associate Professor 6 for Finance Program & School of Business and Governance at the Ateneo de Davao University E. Jacinto Campus; **Ryan G. Er-**

estain, an affiliate of the University of Asia and the Pacific; **Ronald Aaron U. Po**, Instructor for Industrial Engineering and OR Department at the University of the Philippines – Diliman; **Cyrus Angelo A. Selga**, a graduate student of Industrial Engineering and OR Department at the University of the Philippines Diliman; **Ma. Antonieta Tagimacruz**, Instructor at the Saint Louis University. The other two new members are **Diomedes A. Racelis**, an Associate Professor for IRNR –CFNR at UP-Los Baños, Laguna, who was encouraged to join ORSP after giving a talk during the July Technical Forum and **Maureen G. Valerio**, Faculty in the College of Commerce at the University of Santo Tomas.

From the Industry, ORSP welcomed **Sandra S. De Leon**, Vice President of Bancassurance at New York Life Insurance (Phils.) Inc.; **Darlene Fenix**, Rules Engi-

TIP Institutional Members



**Rosalia
Gabuya**



**Jaypy
Tenerife**

neer for Supply Chain Strategy and Development at Intel Technology Philippines, Inc.; **Miranda Macasieb**, an Operations Research Jr. Associate for Corporate Planning and Development at San Miguel Corporation; and **Oscar Pedro B. Torrecampo**, an RF Engineer for New Product Introduction group at NXP Semiconductors Philippines, Inc. ♦

Announcements

Membership Dues – Effective January, 2008, payments that are delayed by more than a month will be charged an “activation fee” on top of the regular membership dues. A 10% early bird discount applies to payments made before due dates. Apart from institutional membership fees, the Board approved a lifetime membership fee of P15,000.

Christmas Party – All members are invited to attend the ORSP Christmas party on December 7, 2007 at 7 in the evening at Elise del Rosario's house located at 2 Acropolis Drive, Acropolis Greens, Libis, Quezon City. For other details, contact the ORSP Office. ♦



(L to R) Usec Fortunato de la Peña inducts new members Ismael Pangilinan, Myrna Carandang, Darlene Fenix, Marivic Kipte and Ryan Erestein during the 20th anniversary get-together.



The Operations Research Society of the Philippines

in cooperation with the

UP National Engineering Center

cordially invites you to its Technical Forum on

OR in Organizations

on November 10, 2007 at 1:00 pm

at the National Engineering Center, UP, Diliman, Q. C.

Speakers:

OR in Strategic Marketing

Dr. Purba Rao

Professor, Asian Institute of Management

OR in Finance

Vic Reventar

Consultant, American Data Exchange Corporation

OR in Operations

Marlene Gutierrez

Central Planning Manager, KFC/Mr. Donut Philippines

Members - P 350.00 Student Chapter Members- P 200.00 Others - P 500.00

Registration

For reservations, fax your name, organization and deposit slip to the ORSP office. Please make your reservations early as number of participants is limited.

Payment Details

Checks should be made payable to the *Operations Research Society of the Philippines* (please do not abbreviate) and deposited at any Banco De Oro branch to **Account No. 1510028666, BDO Libis**. Please fax your deposit slip and registration form to (02) 439-9496. Your payment will be acknowledged by fax. Your receipt will be available for pick up at the Registration desk during the forum. You may apply for / renew your membership to avail of the member's rate. Fees are inclusive of snacks and forum materials. Certificates of attendance will be given.

For details, contact: Carol Gica

Telefax : (632) 439 9496; Telephone: 396-1020

Email: secretariat@orsp.org.ph

If undelivered, please return to:

Operations Research Society of the Philippines

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Mobile: (63) 927-8875219
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CONGRATULATIONS!

Aura Matias, past President of the ORSP, was among the twenty four alumni conferred awards by the UP Alumni Association during the 94th UP General Alumni-Faculty Homecoming and Reunion last June 23. Dr. Matias is this year's recipient of the Outstanding Professional Award for Engineering and Technology. She was cited for having made a distinctive mark in all areas of university thrusts; teaching, research and extension. An outstanding teacher, she has been honored by both her students and colleagues. An excellent researcher, she has received highest accolades from the jury of her peers. An energetic extension worker, she has shared her expertise at national and international forums and has published books and scholarly articles that have enriched her discipline. ♦

Dr. Myrna G. Carandang, Associate Professor 7 at the UPLB College of Forestry and Natural Resources was appointed University Registrar effective June 2007. ♦

Dioscoro "Bob" Baylon, Jr. is now Dean of La Salle College of St. Benilde's School for Professional and Continuing Education, SPaCE has a Career Development Program for mature students who wish to complete their college education while working. CDP currently offers degree programs in BSBA. ♦

Dr. Romulo "Romy" Pizaña was appointed Deputy Director of the UP Diliman Extension Program in Pampanga, which operates in Clark Freeport. He is still very much involved as conductor and musical director of three choral groups, His Sounds, the Manila Concert Choir, and the UCGS Chancel Choir. ♦

Dr. Genaro "Gene" Cuaresma, outgoing Director of the Institute of Mathematical Sciences and Physics (IMSP), was appointed Chairperson of the Department of Human Kinetics, College of Arts and Sciences, UP Los Baños. *ORSP looks forward to his papers on OR in Sports!* ♦

Alleli Domingo was appointed Deputy Director and Coordinator for Curriculum and Instruction for the Institute of Mathematical Sciences and Physics, College of Arts and Sciences, UP Los Baños. She was also designated as editor-in-chief of "*Sipnayan*", the official publication of IMSP. She was one of the seven composer/ lyricist finalists of the UPLB Centennial Theme Song Competition staged as "19.09 Music Fest" on September 27, 2007 at the university auditorium. Her song entry entitled "*Dantaong Dahuyan ng Kamalayan*" (streams of consciousness of servant-leadership for the cause of nation-building) *bagged* the Audience Choice Award. *Music and Math do go together!* ♦