



# NEWSLETTER

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## 2010 Congress Tackles Emerging Challenges

by Jed Loma



Confab opens with a profound discussion and ends with a triumphant Board celebration.

The 2010 national election opened an opportunity for political reforms and raised our hope for a more accountable political administration. A new vision for governance and development is challenging business and industry to respond accordingly as a necessary partner to government.

It was in this context that the 4th ORSP National Conference got underway last November 5, 2010 at the Grand Ballroom of the Eastwood Richmond Hotel. Iris Martinez of UP-Diliman chaired the annual conference organized by the Operations Research Society of the Philippines (ORSP) with the theme, "OR: Providing Solutions to Emerging Challenges".

### Panel Discussion

Instead of a more traditional format where in speakers make presentations one after the other, the invited speakers became panelists instead. Jaime "Bing" del Rosario moderated the panel discussion which centered on identifying the most urgent and important challenges facing business, industry, government, and education as well as finding the most probable solutions through scientific (OR) means. Indeed, the panelists complemented each other's ideas as Bing processed the inter-relationships of the arguments coming from different sectors. The ideas which came out of the discussion were understandable and applicable in real life. This was synergy in the real sense of the word. **Wilson Wy Tiu**, an OR consultant, talked about the enormous

challenges facing the new government and the opportunity to manage change by using available OR tools to keep politics out of policy-making processes, including but not limited to the systematic allocation of the national budget.

**Elise del Rosario**, a former OR practitioner at San Miguel Corporation and immediate past IFORS president, gave an international perspective of OR. She talked about the history of OR and where it is going. While OR is practiced,

only eight have a dedicated OR group, notably, companies that are known to be leaders in efficiency improvement, supply chain management, and customer service.



Nemenzo discusses practical uses of mathematics

**Brian Gozun**, Dean of the College of Business of De La Salle University – Manila, discussed OR in Business Education. He emphasized the importance of OR not only in Engineering but also in Business Management. It is however universally agreed that through OR, managers can make better and more informed decisions.

**Vicente Reventar III**, (continued on page 2)

## 2010-2011 Board Welcomes Miranda as New President

**Francis Z. Miranda** takes over the Presidency of the ORSP for 2011. A Manager of the Integrated Planning and



Francis Miranda  
President

Marie Shella Tan  
Vice President

Iris Ann Martinez  
Secretary

Rex Robielos  
Treasurer

Business Analytics of Zueillig Pharma, he oversees operations research, market research and business planning for new company initiatives. He obtained his BS in IE from De La Salle University, his Master in IE from Purdue University, and graduate units in finance from Harvard University. He is a Certified Financial Consultant (CFC) who has completed coursework for the Certified Management Accountant (CMA) program. Vice President is **Marie Shella U Tan**, an OR Senior Analyst at San Miguel Corporation, who earned her BS in IE (minor in ME) from De La Salle University. She was a recipient of the SIBOL award of the Dept. of Science and Technology for her contribution to the field of Ergonomics.

Coming in as Secretary is 2010 National Conference Chair **Iris Ann G. Martinez**, an Associate Professor and Chair of the Department of IE/OR at UP Diliman, from where she obtained her BSIE (cum laude). She holds a Master of Engineering degree in Precision Machining Systems from Tokyo Institute of Technology and a Doctorate in Mechanical Engineering from the University of Tokyo. Treasurer is **Rex Aurelius C. Robielos**, Dean of the School of Industrial Engineering and Engineering Management

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Chair of Ateneo de Manila's John Gokongwei School of Management Quantitative and Information Technology Department, talked about how banks use OR to maximize investment portfolios while insurance companies minimize possible risks to ensure that funds are available in servicing future liabilities. As a professor himself, he encouraged the faculty and students present to explore the OR tools available mostly for free in the internet. The panel discussion was concluded with the panelists answering questions from the audience.

### Induction of New Members

At the morning coffee break, Alleli Domingo, ORSP President, assisted by Francis Miranda, ORSP Vice President, inducted the new members to the organization. Sworn in were: Bryan Magbutay (Asia Pacific College), Lorena Gomez (DLSU-Lipa), May Macatangay (DLSU-Lipa), and George Tumamak (St. Dominic College of Asia). Young professionals and experienced practitioners alike, the inductees were evidently ready to inject new enthusiasm and dedication to the ORSP membership.

### Plenary Talk

In response to the emerging challenges discussed by the panelists, Keyote Speaker Dr. Fidel Nemenzo, Dean of UP-Diliman's College of Mathematics, gave a very engaging and colorful presentation on the Curves and Codes:

The Mathematics of Information Security and Integrity. From the field of Mathematics, the speaker presented various examples illustrating how the use of pure mathematics led to applications in the field of business and information technology, e.g., development of codes to secure ATM PINs from hackers.

### The Business of Business Analytics

The morning session was closed with a presentation from the Business Analytics software of SAS Philippines. Various real-life applications of OR were discussed and covered a breadth of business problems which included forecasting and quality improvement. This proved to be a very enlightening

presentation on the power of OR tools, especially to the new practitioners in the audience.

### Afternoon Parallel Sessions

The conference afternoon saw six different tracks, each track with four papers presented. Papers were presented in two parallel tracks. System Dynamics and the Transportations tracks were held simultaneously. These were followed with the OR in Agriculture and Education track and the Queuing, Revenue Management, and Distribution Management track. After the afternoon break, the last two simultaneous tracks on Simulation & Applications and the Layouts, Production Planning & Scheduling got underway.

The System Dynamics track included paper presentations on the study for Cervical Cancer Prevention and Control in the Philippines, the Impact of Product Clockspeed on the Dynamics of Industry and Technology, the Sustainability of Filipino Social Enterprises, and the Impact of Delay in Perceiving Market Demand on a Firm's Order Fulfillment Performance under Successive Product



(L to R): Pres Alleli Domingo, VP Francis Miranda induct Jose Mari Igama (Zuellig), Bryan Magbutay (Asia Pacific College), Lorena Gomez (DLSU-Lipa), May Macatangay (DLSU-Lipa), George Tumamak (St. Dominic College of Asia).

Generation.

The OR in Agriculture and Education track had presentations on the Land Allocation Model for Llegado-Relativo Crop Plantation in Sariaya (Quezon), a Fuzzy Goal Programming Approach for the Optimal Allocation of Coconut and Jatropha for Biodiesel Production, the Modification of Enrolment System through the Application of Industrial Engineering Discipline, and the Efficiency of Philippine Public High Schools using Spatio-Temporal Stochastic Frontier Analysis.

The Simulation and Applications track included presentations on the Simulation of Raw Material Utilization in a Fiberglass Pipe Plant toward Wastage Reduction, the Strategic Management of



Congress Chair Iris and Jed open the conference.

Corporate Grapevine, the Non-Traditional Applications of Operations Research, and Minimizing ATM and Branch Cash-in Vault in Philippine Banks.

The Transportation track had papers on Flexible Transportation Model for Less-than-Cargo-Load Trucking Operations, an Experimental Heuristic Method for Transportation Model, Optimum Product Allocation and Single-Stage Combined Evaluation of Fixed and Variable Cost Model for the Multi-Tier Transportation Problem.

Then, papers on Queuing, Revenue Management, and Distribution Management were presented which include Evaluation of Systems Performance in Light Rail Transit Authority (LRTA) at Pureza Station, Analysis of a Media Provider's Peak-Hour Queuing System, Competitive Revenue Management Pricing Model with Multiple Fare Class and Batch Demand, and Determination of the Minimum Value during Order Fulfillment for the Optimization of the Delivery Pool.

Presentations on Layouts, Production Planning and Scheduling included Applicability of Economic Lot Sizing Models using Mixed Integer Programming, Practical Facility Layout Technology for Industrial Engineers and Educators in Asia, Multi-Objective Non-Linear Program Model for Systematic Warehouse Layout Planning, and List Processing Heuristic for Sequencing Parallel Machines in the Three-Machine Flowshop to Minimize Makespan.

### Closing

The day ended with smiles and good-byes from the delegates whose Saturday, normally allotted for leisure, was spent on an optimal productive endeavor. Meanwhile, old friendships were renewed, new ones begun, and networks created. ♦

## Abridged Transcript of Panel Discussion

### A. Personal work challenges of OR luminaries and practitioners. Each of us faces a unique set of work issues. What are yours?

**Brian:** As dean, I need to work, and manage, both downwards and upwards, people with different wants and needs. Then there are various systems being used in the university – they're not all in synch. e.g., one office uses bar codes for tracking documents but other offices don't.

**Wilson:** I'm continuously challenged by incoherent and uncoordinated policy decisions. Of course, there's the politics in nearly everything government does. There's also the bureaucracy and corruption.

**Vic:** As an OR practitioner, it's getting management "buy-in" to the techniques and capabilities of OR. The challenge is to explain to CEOs in layman's terms why, for example, optimization and simulation can help streamline their supply chain without using complicated equations. The other challenge is for me to learn how to utilize all these free, open source resources in projects where OR is appropriate.

**Elise:** As a consultant, I find the task of getting to the client's real problem the most challenging. I have learned over the years how important it is to distinguish symptoms from the real problems. Also, with the great strides in computing power available even to laptops, with new non-linear optimization tools, with new methodologies coming out all the time, I'm challenged to keep updated. As an analyst I never realized that the spreadsheets could be used to solve OR problems. When I was a young analyst, I did not hear of DEA, genetic algorithms, the tabu search, or problem structuring methods. It's like being on a treadmill –

you have to keep running to stay in place.

### B. OR use in the private and public sectors. Is OR playing a role in Philippine commerce and industry? In which sectors and functions has OR made the most headway?

**Vic:** I am personally familiar with product companies using OR to optimize their supply chain, banks using OR to optimize their portfolios, and insurance companies trying to manage, optimize and balance their assets to make sure that they have sufficient funds to pay future liabilities. In the public sector, I can think of many possible uses - traffic, garbage collection, optimal deployment of the police force, allocating resources during disasters, managing the electricity grid, optimal operation of our water dams, manpower allocation and deployment, and many others.

**Elise:** One just needs to look at all the available ERP software, those with "OR inside" to realize that majority of OR applications for business is in logistics – getting the goods where it is needed at the right time of the right quantities. Having said that, and notwithstanding the benefits that OR offers its users, its adoption in Philippine companies has been underwhelming. It's now 2010 and yet in the ORSP, we see only eight companies having a dedicated group doing OR work.

**Wilson:** The use of mathematics may be the most practical or accurate approach to policy decisions – including conflict resolution at the macro level. Right now, we have no coherent industrial policy or its compendium strategic development plan, neither is there an energy plan, a water plan or a food plan. OR could help. Also, due to the downward skip of the economy, as well as the decreasing quality of life, there is pressure to depoliticize the policy-making processes by using scientific approaches, utilizing OR framework and methodologies. OR could be used to reformulate policies on the age-old poverty problem, population management, and climate change related issues. This is where the OR practitioners and advocates can take aggressive posturing. In labor and industrial relations where I'm in now, candidates include wage setting and occupational safety.

*Moderator Bing del Rosario manages to draw out what the panelists had to contribute within the time allotted to the session.*



### C. Phils. vs. internationally. Does it

**imply that Philippine private and public sectors compare poorly in OR use and appreciation vs. internationally? And which countries lead in OR practice? Are there areas, methodologies, tools or applications where OR is used in the UK or US but not in developing countries like ours?**

**Elise:** I would put the UK and USA among the top in OR practice for business and government. IFORS membership numbers also give a clue - the US has the highest headcount, followed by the UK. UK has an advanced state of OR application in government while US would have more in the business sector. I would say Canada and Germany follow closely in terms of a combination of academe and practice. Japan has a huge OR community, but most of them are in the academe. The Philippines is at par, if not a little bit better among the developing country OR practice. Interestingly, a U.S. Wall Street Journal survey released this month ranked "mathematician" or one who uses quantitative methods for problem solving as the number one job out of 200 professions, according to the 5 criteria of income, environment, employment outlook, physical demands, and stress. Computer Engineer was "only" 5<sup>th</sup>. One example of a technique used mostly in developed locations - OR workers in the UK regularly report the use of problem structuring methods but I have yet to hear of its application in local business. This could be attributed to lack of competence and training in the area. I know that these methodologies are not taken up as part of the OR curriculum in local universities.

**Vic:** Most companies and universities that are members and present at INFORMS could be considered role models.

**D. Obstacles. Clearly, OR is underappreciated and under-utilized. Why? Is there a problem of OR visibility and awareness? Are the OR practitio-**



*The afternoon sessions featured paper presentations in parallel tracks.*

## Abridged Transcript... (continued from page 3)



*Delegates listen as they prepare their own questions.*

### ners and OR professionals also to blame?

**Elise:** It's not a well-known discipline, as math, statistics engineering – or even corporate planning – are. The name itself, which by the way, was coined by the Brits, is confusing and not descriptive. In fact, there are moves to change it, and several options have been bandied about – decision science, management science, business analytics, etc. Even the academic community is not of one mind, with OR faculty units lodged in the Math, Engineering and Business colleges. Surprisingly, even US' INFORMS thinks lack of visibility is a major issue in the US. Which led them to a "Science of Better" PR campaign in 2003. They stopped the ad campaign in 2007 and instead contracted a marketing consultant to craft a marketing strategy and hired a full-time Marketing Director to execute the strategy. Therefore, while there is a wide gap between the extent of OR practice in business in the US and the Philippines, they are plagued by the same problem of lack of visibility.

**Brian:** In the business school setting, OR is currently not appreciated as much as other quantitative courses such as finance and accounting. For example, MBA students would "focus" on accounting and finance because they find it more interesting and easily applicable to their work. OR for them is still traditionally for engineering purposes. Second point, we have decent practitioners and academic researchers. But - there is a

need to revitalize the curriculum by emphasizing OR as a decision-making tool for business and management. Students should be taught how to use OR tools in various aspects of business (e.g. optimization in finance, Markov analysis in marketing, etc.) Lastly, math phobia is common among students. In the management field, OR is still a course that students dread to take because of its quantitative nature. We don't have enough people taking up math, engineering, and OR.

**Elise:** Assuming we get past top management's fear of the unknown through more education and marketing, or because they all suddenly have MBA degrees, there are still issues. One, historically, their seat-of-the-pants decision-making has tended to yield acceptable results. So why change? Two, alternatives are often not well-defined. We've always rented our barges before. Why think about buying? And three, there's always been top management reluctance to spend too much time, like in data gathering. They want immediate action; they shun "paralysis by analysis".

**Wilson:** Every six years, government's top management changes, which means policies and priorities keep changing too. Government appointees span the spectrum, from highly-educated open-minded technocrats to uneducated, greedy, politically motivated sycophants. And then you have the corruption, which distorts the quality of decision-making.

### E. Supply side. Are our OR competent grads made of the right stuff? What about the OR teachers? What about practicum work? Access to knowledge and continuing education? Curriculum fine-tuning?

**Vic:** The schools are trying their best to produce OR-competent graduates. But – there's still too much time devoted to theory and not enough time on the modeling and more important interpretation of results. The other area of concern is the reliance on teaching the OR method

through proofs and manual computation. Instead, we should also use the computational tools available today to the academic community.

**Brian:** I disagree. I think most schools are producing the right graduates. I think the shortcoming is more on the industry side. Industry should learn how to train and nurture the skills of these OR-competent graduates. Students' OJT in industry must be strengthened where industries give actual problems for students to solve. As for teachers, there is also a need to have faculty members from various non-OR fields. I strongly believe that critical thinking can be taught by both OR and humanities professors.

**Elise:** I find that assigning students to companies for a taste of the real-world has been very useful for my own training as an OR analyst. Therefore, I fully support academia-industry linkages. We will just have to sell this more to industry as few of them see the direct benefit



*"Doc" Pascual (2nd from right) attends conference and reunites with this students, Bing, Vic, Wilson and Elise.*

to them of this program. On continuing education, ORSP envisions itself to be a prime local resource for seminars, workshops and technical forums to contribute to a greater knowledge of OR, both for those who are new to it and those who wish to keep up to date with developments and best practices.

**Wilson:** I disagree. Serious OR works are complex and the aftermath decisions have critical organizational impacts, which I believe cannot be "trained" through practicum and OJT.

### F. Prescription. What needs to be done?

**Vic:** In the curriculum, I'd emphasize applications over theory. I'd promote the use of open-source software (like COIN-OR, LPSolve, etc.) in the schools. I'd encourage the academic community to get academic ver-



*Brian Gozun, Vic Reventar, Elise del Rosario and Wilson Wy Tiu give a variety of perspectives to each issue touched.*

sions of OPL-Studio/Xpress-MP/MPL for Windows and use these software to actually solve problems. I'd encourage the use of spreadsheet modelling and solver-engines within the spreadsheet like Open Solver, etc. I'd also encourage the use of simulation (ProModel, Arena, etc.). Related to this, the academe should perform more OR projects for companies and government institutions, with extensive student participation.

**Wilson:** We need to remove the mystery from OR. Which means translating some of the materials so that they can easily be understood by many more people and creating greater public awareness. Higher public awareness means greater public support, in order to increase the pressure points on corrupt politicians and inefficient bureaucrats. At the very least, ORSP and CORPS should dialogue with NEDA, DTI and DOF, and then with the economic cluster of the Cabinet.

**Brian:** I agree. OR needs to be marketed and sold to the general public. If OR can also be seen in people's daily lives, like in disaster and traffic reduction, then OR can be more familiar with a lot of people.

**Elise:** One, I'd offer OR courses as part of business programs. Two, I'd increase Math competence through proper early education in Math. Three, I'd create more supply through exposure to OR early in education. Four, I'd make sure OR education kept up with the advances in OR modelling and availability of tools. And fifth, I'd push for mandatory continuing education for practitioners. Too many OR researchers and practitioners stay in a narrow "comfort zone" for their entire careers, so despite the fact that the field is broad, many practitioners are not.

**Elise:** In business, it's critical to identify the OR champions in the companies from these: 1) decision makers who use OR directly. 2) those who contract for the use of OR 3) those who choose to have OR embedded in their management processes, though they don't know exactly how it works. We need government support to help fund OR research, education, and marketing. And maybe not a prescription but something to keep in mind – even as we market OR to students to make sure the supply is there, we also have to market to the businesses to make sure these students have jobs when they graduate. ♦

## APORS Members Converge in Malaysia

The Association of Asian Pacific Operational Research Societies (APORS) held its regional conference, APORS 2010, at Bayview Beach Resort in the beautiful island of Penang, Malaysia last Decem-

Economics, United Kingdom. Plenary speaker Elise Del Rosario, immediate past president of IFORS, presented development work case studies and shared stories about overcoming resource constraints. She also presented Prof. Rosen-



*ORSP's Alleli Domingo (first left) and Elise del Rosario (fifth from left) with Chan Yan Chong (HongKong), Lai Kah Wah (Singapore), Nezam Mahdavi Amiri (Iran), Xiang-Sun Zhang (China), Ilias Mamat (Malaysia) and Tatsuo Oyama (Japan) relax after the APORS Council Meeting.*

ber 5-8, 2010. This was the first time an APORS conference had been held in Malaysia.

With the theme "Operations Research Pathways to Sustainable Development", the conference focused on the contribution and impact of OR to sustainable development. APORS 2010 was considered as a key tool for building networks among researchers in the region as well as in promoting the collaborative and creative work on development and sustainability. It also aimed to promote interest on the issue of OR for development, apart from encouraging operational researchers to interact and be a part of the larger, international OR community.

APORS 2010 was organized by MS/OR Society Malaysia in cooperation with the International Federation of Operational Research Societies (IFORS). The event was hosted by Universiti Sains Malaysia (USM). The conference set a new standard in terms of the diversity of the nations represented and breadth of topics covered, with participants coming from China, Hong Kong, India, Iran, Japan, Korea, Malaysia, Philippines, Singapore and Vietnam.

Highlighting the 2010 APORS gathering was the IFORS Distinguished Lecture entitled "Is OR Sustainable?" which was delivered by Professor Emeritus Jonathan Rosenhead of the London School of

head with the IFORS Distinguished Lecture Award. ORSP's very own Aleli Domingo spoke to a highly-appreciative audience on T4T: Exploring OR Education. Other invited speakers included IFORS Vice-President for APORS Xiang-Sun Zhang (IFORS), Janny Leung (IFORS), Chun Kwong Han (Malaysia), Chun Zhi Wu of IBM (Singapore), APORS member representative speakers Degang Liu (China), Tatsuo Oyama (Japan), Nezam Mahdavi Amiri (Iran), and Chan Yan Chong (HongKong). The representatives of the member nations gave their state-of-OR practices narratives, set in the context of each country's OR beginnings and growth patterns. The parallel sessions featured research findings in mathematical programming, queuing, capacity planning, inventory, finance, reliability, simulation and scheduling.

APORS 2010 provided an opportunity to establish networks for the advancement of operations research. Interaction among participants pursuing the same interest and goals has a way of getting us energized for the challenges OR has to offer. The conference was not confined to cerebral matters. The island tour treated the delegates to encounters with a very multi-cultural community, distinctive Malaysian *batik* designs, exotic natural products, impressive USM campus, and the remarkable UN World Heritage site that is George Town. ♦

## 2010-2011 Board Welcomes...

at Mapua Institute of Technology. He obtained his BS in Applied Mathematics from UP Los Baños, and his MS in IE from UP Diliman, **Jaypy T. Tenerife**, reappointed to chair student affairs, teaches at the IE Dept. and is Assistant Quality Assurance Manager at the Technological Institute of the Philippines, An awardee of the 2008 Most Outstanding Faculty Member, he has a Master in IE and Management from the Polytechnic University of the Philippines. He is pursuing a Ph.D in IE (Ergonomics) at the DLSU. Membership Affairs Head **Edwin J. Loma** is Executive Director of Jureidini Management Institute. He took his BS in Management Engineering and MBA degrees from the Ateneo de Manila University, and is a DBA candidate at De La Salle University; Chair of the 2011 national conference is **Maria Lourdes de Guzman U** who obtained her PhD in IE from Purdue University. She is a graduate of BS Math (AdMU) and of MS in Applied Math (major in OR– UP). Previously a supply chain analyst, consultant and trainer working around the U.S and Asia Pacific, she now teaches OR and Statistics at the John Gokongwei School of Management, Ateneo de Manila University.

Continuing as members of the Board are Immediate Past President **Alleli Domingo**, Associate Dean of the College of Arts and Sciences at UPLB. She obtained her MS in Math from the University of Melbourne, Australia. PJOR Editor is **Dennis Beng Hui** who is associate professor at De La Salle University from where he obtained his BS, MS and forthcoming doctorate degrees in Industrial Engineering. Board Director **Agnes Grace Perez** is Executive Assistant to the SVP and General Manager of Petron. She graduated from the Imperial College of Science and Technology and a PhD candidate at the Columbia University. **Nancy Eleria** of UST has a PhD in Economics from UST and a Master in IE from the Asian Institute of Technology. ♦



ORSP President Miranda with the students and faculty of DLSU Dasmariñas.

## IE Aftermath: What's Your Next Step? by Francis Miranda

This was the question of the graduating IE students of De La Salle University Dasmariñas (DLSU-D) which I, as their resource speaker, was expected to address last January 6. The school is located some 30 kilometers from Manila in Cavite and the seminar was held at the College of Engineering, Architecture, and Technology (CEAT) building with some 70 students in attendance.

After discussing the use of Operations Research in facilities location and warehouse layout optimization, I talked about possible career options for an IE graduate. Based on questions, the graduating students, found the second part of my talk a lot more relevant to them. Since I am not a HR expert, I drew from my own experience and insights. Some career options for an IE graduate that I pointed out were those in supply chain planning, manufacturing, corporate planning, information technology, BPO workforce management, business development, market research and of course, operations research. The students were very interested in compensation for each job, major challenges and skills needed to succeed in the workplace.

After my talk, I was shown the major landmarks inside the sprawling 27-hectare campus. Depicting the lifestyle of the *ilustrados* during the 19th century, Museo De La Salle was housed in a building inspired by the *bahay na bato*. Other landmarks I saw included the Emilio Aguinaldo library, a replica of the Emilio Aguinaldo Shrine, and the Cultural Heritage Complex, which looks like a typical plaza of the 19th century. Under construction is the Hotel D'Oriente, patterned after the first hotel in the Philippines which will eventually house the College of International Hospitality and Management (CIHM). Even after a talk that helped students look at their future, the environment kept bringing me back in time!

We proceeded to have lunch at the Museo Café, the open air cafe of Museo De La Salle, with some students and IE faculty Estrella Pineda and Philip Ermita. Too bad work at the office was waiting– I could still have used some time to imagine what an OR analyst would be optimizing in the 19th century! ♦

## Forum Features “Science of Management”

by Alleli Domingo



(L to R): Jasmin Po-Sayo, Anne Aligaya, and Wolfrando Capinpin Jr share different aspects of OR applications.

In cooperation with De La Salle University (DLSU) Manila's College of Business and College of Engineering, ORSP hosted its first technical forum for the year. The event took the whole afternoon of March 5, 2011 at the Yuchengco Hall, De La Salle University Manila. In his opening remarks, ORSP President Francis Miranda set the mood for “The Science of Management” forum by characterizing ORSP's three-pronged theme of the three C's: collaboration, creativity and competence, the defining elements of workplace success. He presented an overview of the movement from traditional to non-traditional applications of OR applications.

Wolfrando M. Capinpin, Jr., the Operations Manager of Primemovers Materials and Handling Corporation, a third party service provider for warehouse management, transportation and materials handling service, drew from his 33 years of work experience in San Miguel Corporation. He traced the evolution of logistics, defined the role of logistics in the supply chain, and discussed integrated logistics framework, functions and planning process that lend support to an interconnected supply chain.

Ms. Jasmin Po-Sayo, Vice-President for

## ORSP Keeps A Cerebral Tradition

The ORSP Christmas party, a permanent fixture in the ORSP calendar, was held last December 10, 2010. As with nearly all ORSP Christmas parties, the event was hosted by Elise and Bing del Rosario in their lovely Christmas festooned Acropolis home.

Malu and Peter U were the first to arrive, followed by ever-reliable Mar Castaño, Wilson Tiu, Shella Tan, Rozano Santos, Vic Reventar, Rex Robielos, Marlene Gutierrez, Agnes Perez, Jaypy Tenerife and Rosalia Gabuya. Aura Matias and Iris Martinez arrived

Sales and Marketing of Intranet and Business Systems, with 18 years of experience in IT consulting, training and personnel development, spoke on Workforce Management in the Business Processing Outsourcing (BPO) industry. She focused on the value of forecasting workload, scheduling call center agents to meet targeted service levels, and monitoring the adherence to schedules. Considering that people cost accounts for 70 percent of total contact center operating costs, Sayo emphasized that the right number of skilled agents in place at the right time is critical to the BPO industry's success.

Ms. Anne Aligaya, Senior Manager at



Gozun (2nd from left) representing DLSU in this joint activity, welcomes to the Yuchengco Hall ORSP's (L to R): Del Rosario, Miranda, Tan, de Guzman U, Domingo and Robielos.

marketing information provider AC Nielsen, discussed the science behind category and space management. The goal is to arrange products in a single or multiple level-shelf that would maximize sales and profitability. She showed snapshots of Nielsen's Spaceman software.

The OR practitioners, faculty members and students from various universities who attended the forum engaged all the speakers in lively discussions during the open forum that followed each talk. ♦

later since they had to greet-and-run from the AMIEP Christmas party which was being held at the same time. The last to arrive were special invited guests Fidel Nemenzo, the keynote speaker at the 4<sup>th</sup> annual conference, and his mom Princess Nemenzo, who came at the special request of PSHS alumni in the ORSP Board.

As with previous ORSP Christmas parties, Bing entertained with his after-dinner "thinking man's" games. There were several but the main feature was the Family Feud (really, school feud) involving Geography Top 10. As usual, capping the night was the guessing game, this time requiring the attendees

## UP Recaptures OR Quiz Gold *by Pao Ordoña*

Members of the various ORSP student chapters and affiliates gathered together at the SGV Conference Hall of the Asian Institute of Management on February 5 for the Annual Student Congress. With nearly 600 students packing the venue to full capacity, the program started with Paolo Ordoña (UP Diliman) singing the National Anthem, Edison Bagnate (De La Salle Dasmariñas) leading the invocation, and Domingo Lucenario III (AdMU), ORSP Student Chapter President, welcoming everyone to the congress.

First to speak was Arnel F. Hibo, Senior Vice President of the AMA Educational System, who talked on Decision Management and how this is exemplified in the evolution of the AMA Educational System from a network of computers in a tenement in Mandaluyong City in 1980, to its current network of over 100 campuses. He discussed the decisions that had to be made and the strategies employed at various stages of the growth of the organization. The second speaker, Maria Victoria V. Jasmin, Undersecretary for Tourism Regulation, Coordination, and Resource Generation of the Department of Tourism, discussed how OR could possibly help the tourism industry for which the government has big development plans.

The annual Operations Research Quiz Bee then followed. Representatives from the various student chapters battled it out with three teams - UP Diliman, Ateneo de Manila University, and De La Salle University left standing after the easy and average rounds. UP Diliman slowly



UP team holds on tight to the championship trophy.

pulled away in the difficult round. After three hours of solving OR problems, the UP Diliman team composed of Vin Perez, Gerrick Daway, Diway De Leon, Mico Cariño, and Gil San Miguel emerged victorious. They successfully defended the OR Quiz Champion title won by UP Diliman last year. On hand to share the award were their mentors - Claro Arriola, Angelo Ani, and Raymond Lu.

Ateneo de Manila University (AdMU) and De La Salle University (DLSU) captured the second and third places, respectively. ♦

### More About ORSP Student Chapters

The Student Federation was established in 1989 as an initiative ORSP to invest and train the Operations Research practitioners of the future. Comprised primarily of students taking up Management Engineering, Industrial Engineering, Math, Business, and Computer Engineering, the Federation has taken the lead in uniting the different programs from the various of Universities in Luzon.

The ORSP Student Federation members joining the 2011 activities include:

Ateneo de Manila University  
De La Salle University – Manila  
De La Salle University – Dasmariñas  
De La Salle University – Lipa  
University of the Philippines- Diliman  
University of the Philippines Los Banos  
University of Santo Tomas  
Adamson University  
Mapua Institute of Technology  
Colegio de San Juan de Letran  
Far Eastern University  
Lyceum of the Philippines U – Laguna  
Tarlac State University  
Southern Luzon State University  
Asia Pacific College  
Technological Institute of the Philippines  
University of Batangas  
St. Dominique College of Asia  
Mondriaan Aura College ♦

to guess the number of Hershey's Kisses Bing had put in the crystal vase. Not too surprisingly, the winner was Dr. Nemenzo, who presumably used advanced mathematical techniques to get close to the actual number.

By 11:00 pm, the ORSP members who came gave out their Christmas gifts and said their goodbyes. ♦



## Welcome Members and Student Chapters

ORSP is delighted to present the following new members:

From the *Academe*: **Bernadette Cunanan** is a Full-Time Math Faculty of Asia Pacific College. **George Tumamak** is the Chairperson of School of Business and Computer Studies of St. Dominic College of Asia. **Dr. Marilyn C. Mabini**, a former ORSP Board member, rejoins us. She is faculty member of Industrial Engineering Department of University of Santo Tomas.

From the *Industry* sector: **Jose Mari Igama** is an Operations Research and Economic Planning Analyst of Zuellig Pharma Corporation. **Rondilla Kaian** is an Cost Engineer / Safety Assistant, QEHS Department of CESCO Offshore Construction. We are glad to have balik-ORSP members: **Darlene Fenix** of Intercontinental Hotels Group (SC Reservations, Inc). **Rogelio Fernando** of VAO Software Solutions. Past ORSP Board director **Marlene Gutierrez** of SUNNY SMILE FOOD CORP. (KFC-Mr Donut Phils).

*Institutional* members joining ORSP include **Our Lady of Fatima University-Valenzuela Campus** with **Dean Ignacio C. Cordova Jr.** and **Wilbert L. Corpin** as designated members.

New student chapters were likewise added during the period, namely, **Technological Institute of the Philippines - Manila**, **Lyceum of the Philippines-Laguna Industrial Engineering Society** and **Mentors' Society of Polytechnic University of the Philippines-Taguig Campus**♦



Ignacio C. Cordova



Wilbert L. Corpin



Rondilla Kaian



George Tumamak

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## From the President's Desk by Francis Miranda

My vision for ORSP, as its newly elected president, revolves around three themes that all start with letter C.

First is **Collaboration**. It is very timely that the first 2011 activity is a partnership with the College of Engineering and College of Business of De La Salle University. For the remainder of the year, ORSP plans to collaborate with other organizations to help boost awareness of Operations Research. One such activity is a joint project with the Philippine Association of Collegiate Schools of Business (PACSB) now on the drawing board. In recognition of the increasing importance of Information Technology in creating OR solutions, a possible partnership with other professional organizations such as the Computing Society of the Philippines (CSP) is being studied.

Second is **Creativity**. While majority of applications of OR is still in Supply Chain, there is a huge potential for OR outside this area. An example is the application of OR in the Business Process Outsourcing (BPO) industry, now worth more than \$11B in the Philippines. Every BPO operation needs workforce optimization. This application was brought to the attention of the ORSP membership during the recently concluded Technical Forum. Another potentially huge opportunity is the application of OR in the World Wide Web. ORSP, through its activities and seminars, will bring to the consciousness of its members the non-traditional applications of OR.

Third is **Competence**. ORSP will strive to contribute to an increased competence of OR practitioners by conducting workshops on OR applications and tools. Critical here is forging strong relationships with software vendors who do carry off the shelf solutions for forecasting, demand planning, strategic facilities planning, simulation, workforce management and retail category and space management. ORSP will lead movements to enhance OR awareness and aptitude in the industry and academe.♦

The 5th ORSP national conference seeks to bring together OR researchers, academicians and practitioners, whose collective work has sustained continuing development in the field of OR in the Philippines. The conference aims to provide a forum for:

- researchers to present their work on the theoretical, computational, and application aspects of operations research;
- practitioners to share problems, methodologies and outcomes encountered in applying OR to solve real-world problems in the Philippines;
- decision-makers to gain insights from experiences of others who have benefited from the use of OR; and
- delegates to discuss how OR can help contribute to greater competitiveness in light of the current Philippine economic and political landscape.

For details and other announcements, go to [www.orsp.org.ph](http://www.orsp.org.ph)