



Technical Forum Tackles Power and Data Implications of Social Media

by Elise del Rosario

The 2017 ORSP technical forum held last September 2, 2017 at the Ateneo de Manila University featured three speakers who spoke on the Big Data that comes from Social Media and how this has been used to market products and assess consumer reactions to products and services.

The first speaker, **Matec Villanueva**, talked about the consumer and the choices that face him or her, the ensuing conversation, collaboration and creation that happens and finally, the data that is generated from all these activities. A marketing professional who is a CNN Consultant and former CEO of Publicis Manila, she kept empha-

sizing that data must not stay as numbers but must turn into insights.

This was the same point made by the second speaker, **Cherry Ann Almero**, who is currently data scientist at Sun Life Asia Data Analytics Centre of Excellence. She discussed at length the various levels of maturity of analytics, starting from Descriptive (what) Diagnostic (answers why), Predictive (goes into forecasting) and Prescriptive (the area of Operations Research). She stated how the internet has transformed taxis into Uber, bookstores into Amazon, travel agents to Expedia, Hotels into Air B&B's, TV programs

into Netflix and Records into Spotify. With the availability of data coming from these internet applications, social media has enabled conversion of opinions into data.

How sentiments are translated into data and how these are analyzed was the topic of the third speaker, **Eugene Rex Jalao**. He is currently a professor at the Department of Industrial Engineering and Operations Research, UP Diliman and obtained his Ph.D. in Industrial Engineering from Arizona State University (ASU), specializing in Decision Support Systems, Business Intelligence, Data Mining and Systems Simulation. In



(Left to right): M. Villanueva, C. Almero and R. Jalao give different aspects of voluminous data derived from Social Media.



Rex Jalao receives token of appreciation from Malu U and Vic Reventar.

his talk, he immediately dove into the details of text mining, web mining, and finally, social media sentiment analysis. He described how messages on social media are being converted into positive and negative opinions of the product or service. He touched on the quintuple of opinion, consisting of the object of opinion, feature of the object, orientation or polarity of the opinion on the feature, the opinion holder and the time when the opinion is expressed. The opinion orientation can be positive, negative or neutral. The speaker showed samples of sentiment analysis he made for Samsung, iPhone, and PAL/Cebu Pacific.

ORSP Directors Malu U, Vic Reventar and Elise del Rosario moderated the proceedings. Almost two hundred participants from various sectors as well as students and professors from TIP-Q.C., Colegio de San Juan de Letran, Mapua Institute of Technology, UP Los Baños, University of Makati, Ateneo de Manila, Cavite State University and University of the Cordilleras found the technical forum very informative and gave it a very good feedback.♦

ORSP Holds Workshop on Predictive Analytics

by Elise del Rosario

Eighteen delegates from De La Salle Dasmariñas, University of the East-Recto, University of Santo Tomas College of Commerce and Business, De La Salle Lipa, University of Cordilleras, Holy Angel University, Bulacan State University, Our Lady of Fatima University and San Miguel Corporation participated in the Workshop on Predictive Analytics Using XLStat organized by ORSP on June 17, 2017 at the Asia Pacific College in Humabon Place, Magalanes, Makati City.

The morning session was a lecture on: the Meaning of Predictive Analytics, Applications in Marketing, Finance, Human Resources, Health Care, Law Enforcement, Fraud Detection, Logistics, Government and Non-Profit and Human Language and Thought, A short introduction on Machine Learning.

The Workshop covered the wide range of applications of the various tools available in XLStat. Using Linear Regression, the class worked on the problem of predicting home prices and customer demand. Cluster Analysis was used to Predict Geographic Clusters using Population and then using Demographic Dynamics. Decision Tree was illustrated with the

use of an application in Credit Scoring. Predicting Customer Churn with the use of Naive Bayes tool was tackled next. The tool K Nearest Neighbor was used to see how Breast Cancer can be predicted. Predicting Employee Attrition was tackled with the use of Logistic Regression and lastly, Support Vector Machine was used to predict Survivors of the Titanic.



Guided by Francis Miranda, participants try their hand on the various Predictive tools taken up during the Workshop.

Each participant was able to work on the data sets preloaded in the computer. All participants found the lecture and the workshop very relevant to their work and gave positive feedback on the conduct of the Workshop. The Workshop materials were developed by ORSP Past President Francis Miranda. ♦



With certificates of completion at hand, participants smile for the camera.

New Frontiers for Operations Research Tackled in 2016 National Conference

by Dennis Beng Hui

The 10th Annual ORSP National Conference was held last November 25, 2016 at the Richmonde Hotel, Eastwood, Quezon City. The event attracted around 200 participants coming from both the industry and academe. A significant number of participants came from the academe who were interested to learn about a new frontier: the role that Analytics plays in the practice of OR.

The event featured plenary sessions led by invited speakers from industry as well as parallel paper presentations of authors representing various academic institutions. Each of the four plenary speakers provided insights on how Analytics is playing a major role in OR.

Andres Torres, Head of Market Research, Revenue Management and Demand Planning of



Andres Torres

Coca Cola FEMSA Philippines, discussed the value of strengthening the collaboration of industry and academe in developing data analysts here in the Philippines. Torres emphasized that academe provides the theory and training while the in-

dustry role is to provide the context and environment in the practice data analytics. A critical element that is often not highlighted when teaching data analytics is the mindset and context necessary in any data analytics initiative. Oftentimes, the focus tends to be on the tool or the methodology instead of the underlying meaning of the data and its analysis.

Mickey Gonzaga, Chief Operating Officer of AF Payments



Mickey Gonzaga

Inc., shared her experiences on the emerging sector of financial payment systems which is a rich area for seeing the potential value of data analytics. Non-cash financial payment systems are slowly gaining ground in the Philippines where it is expected that sooner than later will this become the norm in daily financial transactions.

Vic Reventar, a lecturer in the AD-

MU John Gokongwei School of Management, shared the opportunities of applying OR and Analytics in the area of Disaster Relief Operations in the Philippines. He showed that tapping geographic, weather, and socioeconomic big data provides a great opportunity to come up with better decisions on how best to provide relief operations during disasters.

Ed Canela, Change Management and Organizational Devel-



Ed Canela

opment Expert, asked the audience on how ready it is to embrace the changes happening both nationally and globally. He called for his audience to think about the implications on business and industry of a technology that has made data more ac-



continued on page 4

STUDENT FEDERATION ELECTS 2017 OFFICERS

by Andrea Stacy Ng and Jermee Villacorte



James Milaflor discusses his work with Nat'l Anti-Poverty Commission

cessible, easier to capture in real time, while generating a voluminous amount of it more than ever before. The challenge he gave was how the OR community can capitalize on these latest trends to come up with better decisions.

Messages not only from the plenary speakers but also from paper presenters point to the indispensable role that has been cut out for Operations Research with the advent of Data Analytics. Powering the predictive and prescriptive aspects, Operations Research is here to stay. ♦



Conference saw a packed audience for all the sessions.

The ORSP Student Federation held its annual election last September 30, 2017 at the Adamson University from 9:00am to 5:00pm. The election was attended by officers from the affiliate organizations of the following schools: Tarlac State University, University of Perpetual Health System – DALTA, Lyceum of the Philippines – Laguna, Bulacan State University, Colegio de San Juan de Letran – Manila, PATTS College of Aeronautics, Technological Institute of the Philippines – Quezon City, De La Salle University – Manila, University of the Philippines – Diliman, University of Santo Tomas, Mapua Institute of Technology, University of the Philippines – Los Banos, and Adamson University.

In keeping with continuous improvement, the Student Federation modified its organizational structure to encourage dynamic collaboration. The Executive Board was established with nine positions of: President, Executive Vice President, Secretary, Vice President for Academics, Communications, Finance, Marketing, Operations, and Publicity. Nominees for each of the posts from each school presented General Plan of Action and answered questions raised from the floor. This was followed by the election, an official counting and announcement of win-

ners and finally, the oath taking. Elected as officers were: President, Jermee Villacorte (AdU); Executive Vice President, Nelson Lleno (UPLB); Secretary, Jean Leano (MIT); Vice President for Academics, Krishia Mallorca (UPHSD – Las Piñas); Vice President for Communications, Rojeene Bondoc (DLSU); Vice President for Finance, Darren Manlambus (FEU); Vice President for Marketing, Russel Roco (UP); Vice President for Operations, Regina Dela Cruz (LES); Vice President for Publicity, Alona Moncada (UST)

Application for director positions was opened after the Executive Board convened. Committee directors for each committee team were selected after an interview of the candidates. The newly elected board is committed to helping bring forth a fruitful 2017-2018 term for all the members and would-be members of the Operations Research Society of the Philippines Student Federation. ♦



Officers (l to r): Moncada, Bondoc, Lleno, Roco, Manlambus, Villacorte, Leano, Dela Cruz and Mallorca.

Breakthrough with OR Takes Center Stage in Student Congress

by Andrea Stacy Ng

With 18 schools and 22 student organisations in attendance, the Annual ORSP National Student Congress was held on March 11, 2017 at the Teresa Yuchengco Auditorium in De La Salle University – Manila. The Operations Research Society Student Federation held its 11th Annual National Student Congress, with the Industrial Management Engineering Society (IMES-DLSU) as host-organizer.

The Congress theme of *Operations Research in Public Governance* was tackled very well by three well-known public figures. First speaker was **Crispian Lao**, currently Vice Chairman of the National Solid



Crispian Lao

Waste Management Commission under the office of the President, Republic of the Philippines. His topic covered the applications of OR in Solid Waste Management. The second guest speaker was the Department of Science and Technology Secretary **Fortunato de la Peña**, who discussed the



Hon. Fortunato dela Peña

applications of OR in the public sector. In the afternoon, the third guest speaker Senator **Sherwin Gatchalian** talked



Senator Sherwin Gatchalian

about Public Governance and Education.

These three plenary talks were followed by simultaneous competitions: the annual case study and the traditional quiz bee. Light moments were provided by DLSU entertainment groups Inner Soul and Lola Amore as well as by drawing of raffle winners. Participants had the opportunity to take their pictures with the Congress logo in the background. Capping the event was the awarding ceremonies.

Winners of the case study competition were: First place, **University of the Philippines – Diliman**; Second Place: **De La Salle University – Manila**, and in third is the team from Mapua Institute of Technology. UP Diliman team was made up of: Majella Cayley Domingo, Ray Justin Huang, Alejandro Renzo Lim and Wendell Millan, DLSU team members were: Samuel Chen, Christine Fernandez, Karl Ong and Angelia Trinidad while Mapua was represented by:

Jean Patrice Leano, Joseph Mirabueno, Marco Malabrigo and Louis Michael Surabia. Winning the 1st, 2nd, and 3rd places respectively, of this highly-contested quiz bee competition were: **University of the Philippines – Diliman**: Quirby Alberto, Ralston Espiritu, Sonny Guanzon and Vann Maligaya Johntee Tantuco, **De La Salle University – Manila**: Siegfried Barrios, Carlos Ilagan, Ian Ilagan, Jayne San Juan and Kimberly Tee and **University of the Philippines – Los Baños**: Marella Auditor, Vanessa Althea Bermudez, Christian Earl Buna and Mary Grace Lunar winning the . Overall, the congress was attended by over 550 participants, professors, and guests coming from over 20 schools and organizations around the Philippines.

Apart from enlightening students on the role of OR in government in its efforts to alleviate pressing problems in the country, it opened participants' views on the possibilities and applications of Operations Research.

The organizers, led by Stacy Ng, with the assistance of various committees taking charge of: Program, Publicity, Marketing, Registration, Finance, Logistics and External put together a program that it hoped will challenge the country's future leaders towards doing their share in making the Philippines a Breakthrough Nation through OR. ♦

2017-2018 Board of Directors Proclaimed

The 2017 – 2019 ORSP Board of Directors was proclaimed during the January 31, 2017 Board Meeting led by Francis Miranda.

They are: President, Marie Shella T. Mariscal of San Miguel Corporation; Vice President, Edwin Loma of Asia Pacific College; Secretary, Iris Ann Martinez of University of the Philippines; Treasurer, Malu de Guzman U of Ateneo de Manila University.

Joining the current officers are two new Board Members, Vicente Reventar (Ateneo de Manila University) and Dennis Cruz (De la Salle University).

Current Board Members completing the line up are: Dennis Beng Hui (De La Salle University), Juanito Chan (Ateneo Graduate School of Business), Rene Estember (Mapua Institute of Technology), Immediate Past President Francis Miranda (GfK Asia), and Nestley Sore (Adamson University).♦



IFORS President Mike Trick presides over the Board of Representatives Meeting



Quebec Hosts IFORS Triennial Conference and Conference on OR for Development

Compiled from IFORS News, September 2017 issue

The 21st Triennial IFORS conference was held July 17-21, 2017 in Québec City, Canada, with three Filipino representatives. Along with thousands of conference participants, ORSP's Elise del Rosario, Milagros Baldemor and Marino Castano participated in the various activities of the Conference at the Quebec City Convention Centre. *OR/Analytics For A Better World* was the recurring theme in the four plenary talks, 10 keynote sessions, and 1300+ talks spread over 27 areas. The breadth of the topics can be gleaned from the plenary talks given by: Alvin Roth on Marketplace Design; Egon Balas on Disjunctive Programming as a Tool to Convexity/Convex Sets; Martine Labbé on "Bilevel Programming, Pricing Problems and Stackelberg Games; Andres Weintraub on OR Practice Matters.

With the aim of getting Conference participants more acquainted with IFORS, special sessions on the history of the organization, on a second look at the IDL program, and an Ad-

ministrative Committee panel were added to the administrative Board of Representatives meeting that has traditionally been held at every IFORS Meet.

The IFORS History segment organized by Graham Rand (UK) was entitled *IFORS Past, Present and Future*. Rand started the session with the beginnings of IFORS, followed by experiences shared by IFORS Past President Peter Bell (Canada). His presentation was followed by that of IFORS President for 2007-2009, Elise del Rosario (Philippines) who to-date is the only woman to serve as IFORS President. She revealed little-known stories about her term and described how she was recruited by Peter Bell to be the Chair of the Developing Countries Committee. She also discussed her thrust to communicate with the membership, resulting in her emphasis on the newsletter and the website which were relaunched during her time as President. In 2017 IFORS quarterly News is turning 10 years old and she has carefully collected news, personally edited and organized every issue since 2009.

The session ended with the Future of IFORS, with current President Michael Trick (US) pointing out recent developments. Another IFORS session was the IFORS session was called IFORS Distinguished Lecture (IDL) Retrospective. Since

1999 IFORS sponsors IDLs delivered by distinguished OR researchers during regional meetings (ALIO, APORS, EURO and NORAM). In this session, IFORS Distinguished Lecturers dealt with the advances of the work they originally presented in their first IDLs.

A Panel Discussion with the Administrative Committee which briefly described the role of each AC member featured a report on the IFORS News and the Website, headed by Elise del

Chang Won Lee (Korea) as nominees for President and Vice President at large, respectively, for the period 2019 to 2021.

In this cycle, the nominating committee is composed of Chairperson Elise del Rosario (President 2007 -2009); Dominique de Werra (Switzerland, President 2010 - 2012); and Nelson Maculan (Brazil, President 2013 - 2015).

Several papers were presented

at the Université Laval, Québec, Canada just prior to the IFORS Triennial Meeting from June 13 to 14. The conference provided a highly focused and collaborative forum for scholars and practitioners from all continents to exchange ideas, techniques, and insights on a wide range of subjects at the intersection of OR and Development.

The conference format and intimate size allowed for a high degree of exposure and feedback for each submitted paper. In place of parallel sessions, each work was presented to the entire conference delegation, and received thoughtful feedback from assigned reviewers.

The majority of presentations dealt with successful applied projects implemented by governments, NGOs, or industry partners around the world, with primary emphasis on Latin America, Africa, South Asia and Southeast Asia. The projects touched on topics such as urban transportation, humanitarian logistics, microfinance, urban planning, ambulance location, and sustainability metrics.

Elise del Rosario was among the organizers of the conference, attended by Milagros Baldemor who also presented her paper on Data Envelopment Analysis.

The above activities were successful in drawing attention to IFORS as an organization and its lasting impact on international OR over the years. ♦



Organizers (seated) with participants at the end of the Conference/Workshop

Rosario. This was ahead of the Board of Representatives Meeting which focused on the past years' accomplishments and future directions. The Board of Representatives meeting had around 50 participants. ORSP was represented by E. del Rosario. Wearing her hat as a member of the Administrative Committee, she presented the nominees elected by the committee which she headed. During the Board of Representatives meeting held on July 18, 2017, the Nominating Committee chaired by Elise del Rosario put forth the names of M. Grazia Speranza (Italy) and "David"

by Milagros Baldemor in the track of *OR for Development* while Elise del Rosario presented her paper on "Promoting OR."

Both Baldemor and del Rosario were present in a "satellite" event of the IFORS conference, namely, the International Conference on OR for Development (ICORD). An excerpt from the article of Ali and Beeler which appeared in the September 2017 issue of the IFORS News reports:

The International Conference on Operational Research for Development (ICORD) was held

President's Corner

Sheila Tan-Mariscal



It could be said that the past year was the year of Analytics for ORSP.

The 10thNational Conference focused on the application of OR methodologies in Analytics in new business applications, specifically in the financial payments sector, in disaster management, and in digital innovation. The four invited plenary speakers tackled various aspects of Analytics by: citing examples of con-

verting data into relevant, practical and useful aids; discussing how contactless payment solutions can revolutionize customer behavior; reducing the fulfillment times of disaster relief activities; and tackling the history and future of OR in the Philippines.

The very relevant public governance aspect was the focus of the Student Congress discussed by the distinguished guest speakers. Simultaneous competitions yielded a bumper harvest for UP. Winners for the case study competition were: 1st place, UP-Diliman; 2nd place, DLSU-Manila; 3rd place, Mapua Institute of Technology. For the traditional Quiz Bee, winners were: 1st place, UP-Diliman; 2nd place, DLSU-Manila; 3rd place, UP -Los Baños.

The Technical Workshop took place at the Asia Pacific College (APC) with around 20 participants who were given detailed exercises on the use of XlStat, a widely used data analysis Excel add-in for Predictive Analytics. The ubiquitous topic of Social Network Analysis and the Rise of Social Media became a popular topic among the attendees of the Technical Forum held in Ateneo de Manila.

Indeed, Analytics, the buzz word in the industry, took center stage for 2017. As ORSP goes into its 30thyear anniversary, the 11th National Conference sets the tone of going back to the OR core. Looking forward to your usual support and active participation in our upcoming events! ♦

Welcome New Members!

This newsletter issue welcomes new members who have joined the ORSP Team.

Edwin Ferrer
District Supervisor
Pangasinan



Mary Hildence M. Baluyot
Professor
UST College of Commerce & Business Administration



Katrina Lee
IE Chairperson
Colegio de San Juan de Letran Manila



Perry Michael Marcelo
Associate Professor
University of Makati



Nancy Macapagal
Faculty
University of Santo Tomas



Joseph Christian Oliquino
Instructor I
Camarines Sur Institute of Fisheries and Marine Sciences



Melani Cabrera,
IE Chairperson
Holy Angel University



Maria Elena Timbang
Faculty
Holy Angel University



Diane Carmeliza Cuaresma
Professor I
UP Los Baños



Jcob Malaguit
Instructor 3
UP Los Baños



Jerrold Tubay
Assistant Professor
UP Los Baños



Welcome back to our Balikmembers **Ma. Belinda Mandigma** (left), Professor of University of Santo Tomas and **Alleli Domingo** (right), UP Los Baños Professor.

