



# IEOM Society International

May – Happenings

2021 Volume 6, Issue 1

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## IEOM Society meets the COVID Challenge

Our organization, like many others, has been faced with the many challenges of a global pandemic. This has required the IEOM Society to adopt innovative approaches to delivering value to our global community. Our Global Council and the IEOM Society administrative support team has successfully met that challenge! Your organization has utilized the Zoom virtual platform globally. As result, we were able to continue to deliver quality conferences, webinars and other events to our community. The IEOM Society was able to aggressive implement an aggressive marketing strategy that embraced the use of social media communication during the pandemic.

Many of events that were scheduled during the 2019, 2020 had to be reschedule for 2021. As the pandemic continued to impact the globe, your IEOM Society was able to work with local organizing committee in rescheduling our conferences and moving them into a virtual format.

As editor of the IEOM Society Happenings, I am delighted to bring you an overview of the highlights of the many conference and activities that occurred during the pandemic. Thank you to our many industry sponsors, university partners, faculty, and students for their support during this period. We are also grateful to the IEOM Society dedicated administrative support team. Dr. Ali and I would like to express our deep appreciate to Dr. Taufigui Islam for continuous administrative support.

## More news

The IEOM Society is pleased to announce that the Ford Motor Company has become a sponsor of its “Diversity and Inclusion Panel” session. We are grateful for the of this conference event.

The Singapore conference had over 1,200 paper submissions. This was the largest number of submissions ever received at a conference event.

The IEOM Society has been trying to hold a conference event in mainland China. We are pleased to announce that we have received permission to hold a conference in Harbin at the Harbin Institute of Technology.

Our 2<sup>nd</sup> South America Conference held in Sao Paulo brought together all of the countries in South America. This event was also successful added new student chapters and university participation.

The IEOM Society established its first student chapter in Haiti and will hold its 1<sup>st</sup> Caribbean Central America conference in June.

Our 1<sup>st</sup> Indian Conference is in the planning stage and will be held this year.

**Global Council**

The Global Council met on May 28.

**Upcoming Conference 2021-22**

The upcoming conference in 2021 will continue using a virtual format; however, in some instances, the local organizing committees are planning a hybrid event. The following are the conference event that are schedule for the remainder of 2021. Our first on site conference event will our 12<sup>th</sup> Annual Conference in Istanbul, Turkey,

1<sup>st</sup> Caribbean Central American Conference, Haiti, June 2021

1<sup>st</sup> Asia Pacific Conference, Harbin China – Hybrid, July 9-11, 2021

Host: Harbin Institute of Technology (HIT). Harbin, China

<http://ieomsociety.org/china2021/>

4<sup>th</sup> European Conference, Rome, Italy, Virtual, August 3-5, 2021

Host: faculty of Civil and Industrial Engineering, Sapienza, University of Rome

<http://ieomsociety.org/rome2020/>

1<sup>st</sup> Indian Conference, Bangalore, India, Virtual, August 16-18, 2021

<http://ieomsociety.org/india2021/>

2<sup>nd</sup> Asia Pacific Conference, Surakarta, Indonesia, Virtual, September 14-16, 2021

<http://ieomsociety.org/indonesia2021/>

6<sup>th</sup> North American IEOM Conference, Monterrey, Mexico, Hybrid, November 3-5, 2021

<http://ieomsociety.org/monterrey2020/>

4<sup>th</sup> IMEOM Dhaka Conference, Bangladesh, December 26-27, 2021, Hybrid

<http://ieomsociety.org/Bangladesh/imeom2021/>

12<sup>th</sup> Annual Conference, Istanbul, Turkey, March 7-10, 2022

Venue: Kadir Has University, Istanbul, Turkey

<http://ieomsociety.org/istanbul2022/>,

**Student and Professional Chapters**

What is happening in your chapter? Let us know and we will let others know in the IEOM Society community. Your chapter can share your story on: [info@ieomsociety.org](mailto:info@ieomsociety.org). If your university does not have an IEOM Society Student Chapter or an IEOM Professional chapter in your city, region or country its easy to complete the process on this link: <http://ieomsociety.org/ieom/chapters/>.

**New Student Chapters**

Several new student chapters have joined the IEOM Society community. We have continued to aggressively reach out to universities around the globe that do not student chapters. The results has been outstanding with nearly 150 student chapters, the IEOM Society has achieved another milestone. Professor Reimer and Dr. Ahad have conduct several virtual webinars for student chapters. Dr. Hayder and Dr. Islam have followed up with providing chapter documents.

**New University Partners**

The IEOM Society International continues to actively seek universities to join our organization as a partner. If your university is not an IEOM Society University Partner, please consider doing so. The annual University Partner membership is \$1,000. As a member, your university logo will appear in all IEOM Society conferences programs including our annual, African, European, North American Asian, South American conferences. Other benefits of University Partners can be found on the IEOM Society website: <http://ieomsociety.org/ieom/university-members/>.

**International Journal of Industrial Engineering & Operations Management (IJIEOM) –**

The 2<sup>nd</sup> issue of the IJIEOM has been published and is available online: <http://www.ieomsociety.org/journals/issues/>. The IEOM Society would like to express our deep appreciation to the Editor of IJIEOM, Jose Arturo Garza-Reyes, Professor of Operations Management and Head of the Centre for Supply Chain Improvement at the College of Business, Law and Social Sciences, University of Derby, UK, the Editorial Review Board and to the authors who have submitted their research papers to the IJIEOM for publication. We encourage you to complete your document and submit it as soon as possible.

<https://mc04.manuscriptcentral.com/ijeom>

**Fellows Recognition**

The IEOM Society will hold its 3<sup>rd</sup>. installation of Fellows at the Awards Dinner in Dubai at the Hyatt Regency Hotel on Thursday, March 12, 2020. This recognition is bestowed upon IEOM Society members who have demonstrated their dedication to the mission of the organization over the past five years.

**2021**

- Robert de Souza, Executive Director and CEO, The Logistics Institute – Asia Pacific & Senior Fellow, National University of Singapore
- Ali Elkamel, Professor of Process Systems Engineering, University of Waterloo, Waterloo, Ontario, Canada
- Abdul Hakim Halim, Professor, Industrial Engineering Department, Institut Teknologi Bandung (ITB), Bandung, Indonesia
- Wahyudi Sutopo, Professor, Department of Industrial Engineering, Engineering Faculty, Surakarta, Indonesia
- T. Yuri M. Zagloel, Professor, Dept. of Industrial Engineering, Engineering Faculty, Universitas Indonesia, Depok, Indonesia

Awards Presented at the 11<sup>th</sup> Annual IEOM Singapore Conference in March 2021

**IEOM Fellows**

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- Dr. Robert de Souza, Executive Director and CEO, The Logistics Institute – Asia Pacific & Senior Fellow, National University of Singapore
- Dr. Ali Elkamel, Professor of Process Systems Engineering, University of Waterloo, Waterloo, Ontario, Canada
- Prof. Abdul Hakim Halim, Professor, Industrial Engineering Department, Institut Teknologi Bandung (ITB), Bandung, Indonesia
- Prof. Dr. Ir. Wahyudi Sutopo, Professor, Department of Industrial Engineering, Engineering Faculty, Surakarta, Indonesia
- Prof. Dr. Ir. T. Yuri M. Zagloel, Professor, Dept. of Industrial Engineering, Engineering Faculty, Universitas Indonesia, Depok, Indonesia

**Distinguished Excellency in Academia Award**

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- Professor Cheong Hee Kiat, President, Singapore University of Social Sciences

**IEOM Distinguished Leadership Award**

- Mr. Ong Kim Pong, Regional CEO of Southeast Asia, PSA International, and CEO of PSA Singapore

**IEOM Distinguished Educator Award**

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- Dr. Chung Piaw TEO, Provost's Chair Professor, Executive Director, Institute of Operations Research and Analytics (IORA), NUS Business School, National University of Singapore
- Dr. Ruth Banomyong, Professor and Dean, Thammasat Business School, Thammasat University, Thailand
- Dr. Rex Aurelius C. Robielos, Professor and Dean, School of Industrial Engineering and Engineering Management, Mapua University, Intramuros, Manila, Philippines
- Dr. Lu ZHEN, Dean and Professor, School of Management, Shanghai University, Shanghai, China

**IEOM Distinguished Industry Award**

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- Alex Teo, Vice President & Managing Director – South East Asia, Siemens Digital Industries Software, Singapore
- Dr. Victoria Jordan, Vice President – Quality, Emory Healthcare, Atlanta, Georgia, USA
- Dr. Jenson Goh, Chief Information and Learning Officer, Monde Nissin Singapore Pte Ltd., Singapore
- Dr. Koh Niak Wu, CEO and CTO, Cosmiqo International, Singapore

**IEOM Distinguished Professor Award**

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- Dr. Nagasawa Shin'ya, Professor, Graduate School of Business and Finance, Waseda University, Tokyo, 1698050, Japan
- Dr. Tae-Eog Lee, Professor, Department of Industrial & Systems Engineering, Korea Advance Institute of Science and Technology-KAIST, South Korea

**IEOM Outstanding Professor Award**

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- Dr. Rajesh Piplani, Associate Professor, School of Mechanical & Aerospace Engineering, Director of M.Sc. in Supply Chain & Logistics, Nanyang Technological University, Singapore
- Dr. Hoong Chuin LAU, Professor of Information Systems and Director of the Fujitsu-SMU Urban Computing and Engineering Corporate Lab, Singapore Management University (SMU), Singapore
- Dr. Mi Sandar Mon, Professor and Head of Mechanical Engineering Department, Yangon Technological University, Yangon, Myanmar
- Dr. Nguyễn Văn Hợp, Dean, School of Industrial engineering and management, International University - Vietnam National University of HCMC, Ho Chi Minh City, Vietnam

**Outstanding Achievement Award**

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- Professor Melvyn Sim, Provost's Chair Professor and Head of Department of Analytics & Operations, NUS Business School
- Hemlal Bhattarai, Dean, Research and Industrial Linkages (DRIL), Royal University of Bhutan, Jigme Namgyel Engineering College, Dewathang, Samdrup Jongkhar, Bhutan

**Outstanding Young Faculty Award**

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- Dr. Aldy Gunawan, Assistant Professor of Information Systems (Practice), School of Information Systems, Singapore Management University, Singapore
- Associate Professor Joel GOH, Associate Professor, Department of Analytics and Operations, NUS Business School and Associate Director, NUS Global Asia Institute, NUS
- Dr. Kinnaeth Vongchanh, Lecturer/Researcher, Department of Industrial & Mechanical Engineering, Institute of Technology of Cambodia, (ITC), Phnom Penh, Cambodia

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**IEOM Outstanding Researcher Award**

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- Professor Loo Hay LEE, Director of the Centre for Next Generation Logistics (C4NGL) and Director of the Centre for Maritime Studies and Professor in Department of Industrial Systems Engineering & Management, National University of Singapore
- Professor Ek Peng CHEW, Director of the Centre of Excellence in Modeling and Simulation for Next Generation Ports (C4NGP) and Professor in Department of Industrial Systems Engineering & Management, National University of Singapore
- Dr. Vincent F. Yu, Professor, Dept. of Industrial Management, National Taiwan University of Science and Technology, Taipei, Taiwan

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**IEOM Diversity and Inclusion Award**

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- Hajj Flemings, CEO/Founder, Rebrand Cities, Birmingham, Michigan, United States

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**Distinguished Woman in Industry and Academia (WIIA) Award**

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- Ms. Sim Bee Hia, CEO, Food from the Heart, Singapore
- Dr. NG Szu Hui, Associate Professor and Acting Head, Department of Industrial Systems Engineering and Management, National University of Singapore
- Dr. Bertha Maya Sopha, Associate Professor and Former Director of Industrial Engineering, Universitas Gadjah Mada, Indonesia and Chair of Indonesian Association of Industrial Engineering Higher Education Institution (BKSTI)

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**IEOM Outstanding Faculty Advisor and Mentor Award**

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- Dr. S. Viswanathan, Professor of Operations Management, Associate Dean (Research), Nanyang Business School, Nanyang Technological University, Singapore

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**Teaching Excellence Award**

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- Associate Professor Poh Kim Leng, Department of Industrial Systems Engineering and Management, National University of Singapore
- Dr. Daniel Tuladhar, Associate Professor and Head, Department of Mechanical Engineering, Kathmandu University, Nepal
- Dr. Qutubuddin S.M., Associate Professor Industrial & Production Engineering Department P.D.A. College of Engineering Gulbarga, Karnataka, India

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**Operations Management Teaching Excellence Award**

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- Dr. Le Thi Huynh Anh, Faculty of Project Management, The University of Danang, University of Science and Technology, Vietnam
- Dr. Moe Moe Myint, Associate Professor, Department of Information Technology, Technological University (Mandalay), Myanmar

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**IEOM Distinguished Service Award**

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- Assoc. Prof. Tan Yan Weng, Head of Programme, Logistics and Supply Chain Management, School of Business, Singapore University of Social Sciences, Singapore

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**IEOM Outstanding Service Award**

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- Dr. Sugoutam Ghosh, School of Business, Singapore University of Social Sciences, Singapore
- Dr. Tay Huay Ling, School of Business, Singapore University of Social Sciences, Singapore
- Dr. Aldy Gunawan, Assistant Professor of Information Systems (Practice), Singapore Management University, Singapore
- Dr. Tan Kok Choon, Associate Professor (Practice) & Deputy Head, Dept. of Analytics & Operations, National University of Singapore

**Outstanding Conference Contributor Award**

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- Professor M Chairul Basrun Umanailo, Head, Centre for Planning and Community Development Studies (PSP2M), Universitas Iqra Buru, Indonesia
- Dr. Jumadil Saputra, Senior Lecturer, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia
- Ma. Janice J. Gumasing, School of Industrial Engineering and Engineering Management, Mapua University, Manila, Philippines

**IEOM Industry 4.0 Award**

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- Associate Professor GOH Puay Guan, Academic Director (MSc Industry 4.0), National University of Singapore

**Innovation and Entrepreneurship Award**

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- Dr. Murphy Choy, Director of Operations and Technology, SSON Analytics, Singapore
- David Chain, Director, Advent2 Solutions, Singapore

**IEOM Industry Solutions Award**

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- Mr. Mark Tan, Assistant Director, Lean Transformation and Innovation Center (LTIC), Singapore Institute of Technology, Singapore
- Hirishegan Karuneswaran, Business Analyst, PickMe, Sri Lanka

**Innovative curriculum award**

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- Dr. Jafri Mohd Rohani, Head of the Industrial Engineering Programme, Department of Materials, Industrial and Manufacturing Engineering, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia
- Dr. Kotomichi Matsuno, Department of Business Design and Management, Graduate School of Creative Science and Engineering, Waseda University, 3-4-1 Okubo, Shinjuku-ku, Tokyo, Japan

**IEOM Global Engineering Education Award**

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- Dr. Assoc. Prof. Dr. Korakanh PASOMSOUK, Associate Professor, Head of Department Mechanical Engineering and Industrial Engineering, Faculty of Engineering, National University of Laos, Sokpaluang Campus, Laos
- Dr. Tiia Rüttnann, Associate Professor Engineering Pedagogy/Higher Education Pedagogy, Head of Estonian Centre for Engineering Pedagogy, School of Engineering, Tallinn University of Technology TalTech, Tallinn, Estonia

**IEOM Rising Star Award**

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- Dr. Lakshman Singh, Sr. Manager (Projects), Hindustan Aeronautics Limited, Avionics Division-Korwa, Amethi-227412, UP, India

**IEOM Outstanding Student Award**

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- Leow Li Jie Darren, Year 3, BSc Supply Chain Management with Minor (full-time)
- Wong Sweet Ling Adeline, Graduate, BSc Logistics and Supply Chain Management (part-time)
- Roshna Ahmed Shipa, Ph.D. Student in Technology Management, UTHM, Malaysia

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**High School STEM Competition Award**

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**Applied Projects****1<sup>st</sup> Place**

**ID 1151 The Plausibility Of Recycling Used Tennis Strings As 3D Printing Filament**

Anoushka Ghosh, International Baccalaureate Year 1, United World College South East Asia (Dover), Singapore, 139654, Singapore

**2<sup>nd</sup> Place****ID 1202 Cromptimize: A Novel Robot to End Agricultural Yield Inefficiencies through Crop Switching**

Pranav Palleti, Shivam Pathak, Ashok Devireddy, Pranav Prabhuram, Sameer Iyengar, Sukhamrit Singh, and Ankit Kapoor, Evergreen Makers, Evergreen Valley High School, San Jose, CA 95148, USA

**3<sup>rd</sup> Place****ID 1201 Using Machine Learning Optimization to Predict Autism in Toddlers**

Z. Farooqui, B. Sattler, U. Usua, M. Helde, and A. Singh, ARQuest Student Science and Engineering Research Network, ARQuest International, USA

**ID 1141 Park Model using Concentrated-Solar-Power Photovoltaics**

Darren Johanes Manua and Eden Steven, SPH Applied Science Academy, Sekolah Pelita Harapan Lippo Village, Tangerang, Banten, Indonesia

**Overall****1<sup>st</sup> Place****ID 807 Analyzing ACL Injury Risk Using 3D-Motion Sensors and Various Statistical Methods**

Mason Chen, Stanford OHS, Academy Hall Floor 2 8853 415 Broadway, Redwood City, CA 94063, USA

**2<sup>nd</sup> Place****ID 973 2020 US COVID Stock ROI Multivariate Statistical Modeling during COVID-19 Outbreak**

Chi-hong Ho, Junior, Henry M. Gunn High School, Palo Alto, CA, USA

Mason Chen, Sophomore, Stanford University OHS, Redwood City, CA, USA

**ID 1128 Analyzing the Open Electricity Market in Singapore using Data Science Approaches**

Natasha Alexandra Gunawan and Wong Yew Chong Kester, National Junior College, 37 Hillcrest Rd, Singapore

**ID 765 Three-Level Closed-Loop Supply Chain Optimization Considering Self-Healing Packages**

Diorelle Oneil C. Gallarza (Senior High School student), Ardvin Kester S. Ongb, Luis Carlos Miguel M. Eborab, Jake Matthew C. Depositarb, and Juan Limson C. Andradab, Young Innovators Research Center, Mapúa University, Manila, Philippines, Intramuros, Manila, Philippines

**3<sup>rd</sup> Place****ID 1145 Biaxial Tensile Test System: Articular Cartilage Properties in Biaxial vs. Uniaxial Tension**

Aadi Biswas, 10th Grade, Singapore American School (High), Singapore, 738547, Singapore

Van W. Wong , Albert C. Chen, and Robert L. Sah, Department of Bioengineering, University of California, San Diego, La Jolla, California, USA

**ID 1080 Modeling and Analyzing COVID-19 Infection Curves of Different Countries Using Nonparametric Density Regression and Clustering Techniques**

Saloni Patel and Mason Chen, Stanford Online High School, Redwood City, CA 94063, USA

**ID 1144 COVID-19 Vaccine Track and Traceability System**

Warattra Singkarin, Kwinyarut Pongsangthanakul, Kunyapak Teekakun and Pramote Namyang, Satriwithaya School, Bangkok, Thailand

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**Undergraduate Student Paper Competition Award Sponsored by SIEMENS**

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**1<sup>st</sup> Place****ID 256 Smart School Routing Problem for the New Normality**

Carlos M. Leal-Garza and Carlos Gómez-Acosta, Industrial and Systems Engineering Program, University of Monterrey, San Pedro Garza Sada, N.L. México

Jenny Díaz-Ramírez, Engineering Department, University of Monterrey, San Pedro Garza Sada, N.L. México

**2<sup>nd</sup> Place****ID 1168 Lean Purchasing of MRO Supplies in a Philippine Coal-Fired Power Plant: A Portfolio Thinking Approach**

Marvin I. Noroña, Master in Business Administration, Bachelor of Science in Industrial Engineering, University of the Philippines, Philippines

Sarah Jane D. Taleon, Master of Engineering – Industrial Engineering, MAPUA University, Philippines

**3<sup>rd</sup> Place****ID 1301 Association Rule Mining for Driving Behaviors and Road Traffic Accidents in Kuwait**

Atheer AIMutairi, Dana AlKandari, Loulwah Shummais, Reem AlAjmi, and Takeaki Toma, Department of Industrial Engineering, American University of the Middle East, P.O.Box: 220 Dasman, 15453 Kuwait

**4<sup>th</sup> Place****ID 489 Layout of Raw Material Warehouse in PT. Boga Dimsum Indonesia Using Class-Based Storage Method and Promodel Simulation**

Evelyn Adisurya, Lina Gozali, Frans Jusuf Daywin, and Carla Olyvia Doaly, Industrial Engineering Department, Universitas Tarumanagara, West Jakarta, 11140, Indonesia



**5<sup>th</sup> Place****ID 555 Supply Chain Risk Management Strategies in the Face of COVID-19**

Jia Yi Woong and Shao Hung Goh, School of Business, Singapore University of Social Sciences, Singapore

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**Graduate Student Paper Competition Award** sponsored by **EATON Corporation**

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**1<sup>st</sup> Place****ID 1130 Impact of Cultural Behavior on the Bullwhip Effect in the COVID-19 Pandemic**

Thais de Castro Moraes, Department of Industrial Systems Engineering and Management, National University of Singapore, Singapore

Xue-Ming Yuan, Singapore Institute of Manufacturing Technology, Agency for Science, Technology and Research - A\*STAR, Singapore

**ID 265 Application of Multiple Criteria Decision-making Methods in the Human Resource Recruitment Process**

**Maela Madel L. Cahigas, Master of Science in Industrial Engineering, Mapúa University, Manila, Philippines**

**Rex Aurelius Robielos, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines**

**2<sup>nd</sup> Place****ID 382 Value Drivers in Product-Service Systems: An Empirical Study of Two Sharing Business Models**

**Suzana Regina Moro, Post-graduate Program in Production Engineering, Federal University of Santa Catarina, Florianópolis, SC, Brazil**

**Paulo Augusto Cauchick-Miguel, Department of Production and System Engineering, Post-graduate Program in Production Engineering, Federal University of Santa Catarina, Florianópolis, SC, Brazil**

**ID 139 Outsourcing Life Cycle Model for Financial Services in the FinTech Era**

**Tristan Lim, School of Business Management, Nanyang Polytechnic, Singapore**

**Patrick Thng, School of Information Systems, Singapore Management University, Singapore**

**3<sup>rd</sup> Place****ID 1136 Application of TPU – Sourced 3D Printed FDM Organs for Improving the Realism in Surgical Planning and Training**

**Patrich Ferretti, Christian Leon-Cardenas, Merve Sali, Gian Maria Santi, Leonardo Frizziero, Giampiero Donnici, and Alfredo Liverani, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna, Viale Risorgimento, 2 – 40136, Bologna, Italy**

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**Senior Design Project Competition Award** Sponsored by **Tooling Tech Group**

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**1<sup>st</sup> Place****ID 129 Improving Waste Collection & Transportation System at Tadweer**

Khadija Alhmoudi, Shamma Al-Ali, Roudha Alattar, and Khalid Alhosani, Department of Industrial and Systems Engineering, Khalifa University, Abu, Dhabi, UAE

**2<sup>nd</sup> Place****ID 1190 Determination Passenger Satisfaction of a Kuwait Airline Company by Using Multivariate Data Analysis Models**

Ayat Dashti, Danah AlAhmad, Eman AlShammeri, Rawan AlAjjan, Zainab AlAmeer, and Recep Kizilaslan, College of Engineering and Technology, American University of Middle East (AUM), Kuwait

**3<sup>rd</sup> Place****ID 1156 The Healthcare-Planning Problem with Treatment Team (Physician/Nurse) Consistency**

Nasser Khalfan Al-Wahaibi, Abdulaziz Khalfan Al-Mamari, Qabas Salah Al-Rawas and Nasr Al Hinai, Sultan Qaboos University, Oman

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**Doctoral Dissertation Competition Award**

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**1<sup>st</sup> Place****ID 1184 Shared Capacity Routing Problem for Buy-Online-Pickup-in-Store Order Fulfillment**

Rajendra Baraiya and Rohit Kapoor, Operations Management & Quantitative Techniques Department, Indian Institute of Management, Indore, India

Prabandh-Shikhar, Rau-Pithampur Road, Indore, Madhya Pradesh, India

**2<sup>nd</sup> Place****ID 1157 Impact of Multiple Marketplaces in Agricultural Supply Chain**

Dewang Pagare, Operations Management Area, Indian Institute of Management Lucknow, Lucknow, UP - 226013, India

Indranil Biswas, Information Systems, Supply Chain & Decision Making area, Neoma Business School, Rouen, France

Amit Agrahari, Information Technology & Systems Area, Indian Institute of Management Lucknow, Lucknow, UP - 226013, India

Sriparna Ghosh, Economics area, University of Cincinnati, Ohio, Ohio 45221, USA

**3<sup>rd</sup> Place****ID 539 Using Latin Hypercube Hammersley Sampling Method for Algorithm Parameter Tuning: A Case for Differential Ant-Stigmergy Algorithm**

Yasemin Eryoldaş and Alptekin Durmuşoğlu, Department of Industrial Engineering, Gaziantep University, Turkey

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**Master Thesis Competition Award**

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**1<sup>st</sup> Place**

**ID 375 Ferromagnetic climbing robot for industrial flaw detection: An implementation of computer vision**

Peter Oyekola, Department of Mechanical Engineering, Papua New Guinea University of Technology, Papua New Guinea

**2<sup>nd</sup> Place**

**ID 255 Analysis of the Conditions for Quality in Cold Transport Services**

Alejandro Lerma Carrillo and Jenny Díaz Ramírez, Engineering Department, University of Monterrey, San Pedro Garza García, N.L, México

Teresa Gajewska, Cracow University of Technology, Division of Logistics System, Krakow, Poland

**ID 1226 The Effect of Job Training on Employee Performance with Employee Status as a Moderating Variable**

Agung Setyabudi, Forester & Masters Students of Management, Postgraduate Program's, Universitas Bina Darma, Palembang, Indonesia.

Muji Gunarto, Management Department of Economics and Business Faculty, Universitas Bina Darma, Palembang, Indonesia

Anis Marjukah, Management Department of Economics Faculty, Widya Darma University, Klaten, Indonesia

**3<sup>rd</sup> Place**

**ID 1117 Hazard Risk Potential Analysis Using the Fuzzy Bow-Tie Method in LPG Tube Filling Factory**

M. Fadli Perdana, Bambang Syairudin and Retno Widyaningrum, Departemen Teknologi Industri, Institut Teknologi Sepuluh Nopember, Indonesia

**ID 1150 Sustainable Supply Chain Management Practices In Malaysian Non-Manufacturing Sectors**

Hak Kenn Wong and Mehran Doulatbadi, MBA Center, Xiamen University Malaysia, 43900 Sepang, Selangor, Malaysia

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## **Undergraduate Research Competition Award**

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**1<sup>st</sup> Place**

**ID 487 Improving the Capacity of Espresso Machine Using Reverse Engineering Method and VDI 2221 Method**

Claudia Jessica Atmadja, Frans Jusuf Daywin, Lina Gozali, and Carla Olyvia Doaly, Industrial Engineering Department, Tarumanagara University, Jakarta, Indonesia

Agustinus Purna Irawan, Mechanical Engineering Department, Tarumanagara University, Jakarta, Indonesia

**2<sup>nd</sup> Place**

**ID 512 Design of Working Shelf And Design of Layouts on the Working Table with Ergonomic Analysis in Haiso Coffee**

Fernando Valentino, Frans Jusuf Daywin, Adianto, Lina Gozali, and Carla Olyvia Doaly, Industrial Engineering Department, Universitas Tarumanagara, West Jakarta 11440 Jakarta, Indonesia

Agustinus Purna Irawan, Universitas Tarumanagara, West Jakarta 11440 Jakarta, Indonesia

**ID 749 Green Supply Chain Operations Reference (G-SCOR): An Application for Small Garment Manufacturers in the Philippines**

Valerie D. Cruz, Josephine D. German, and Mary Elaine G. Fenix, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines

**3<sup>rd</sup> Place****ID 277 CAD-Aided Preoperative Simulation in Complex Orthopaedic Surgery**

Leonardo Frizziero, Curzio Pagliari, Giampiero Donnici, Alfredo Liverani, Gian Maria Santi, Paola Papaleo and Francesca Napolitano, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna, Bologna, BO 40136, Italy

Giovanni Trisolino, Paola Zarantonello, Giovanni Luigi Di Gennaro, Elena Maredi, Stefano Stilli, and Stefano Stallone, IRCCS-IOR-Rizzoli Orthopaedic Institute, Pediatric Orthopedics and Traumatology, Bologna, BO 40136, Italy

**ID 895 Lean Manufacturing Practices and Their Effect on Sustainability Performance: Insight from Selangor Manufacturing Industry**

Woei-Xiang Tan, Department of Production and Operations Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400 Batu Pahat, Johor, Malaysia

Norasmiha Mohd Nor, Department of Production and Operations Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, 86400 Batu Pahat, Johor, Malaysia

**Honorable Mentioned****ID 490 Modification of Chocolate Grinder Machine Cone Type Using Reverse Engineering Method and Vdi 2221 Method**

Jeshua Ekklesia, Frans Jusuf Daywin, Adianto, Lina Gozali, Carla Olyvia Doaly and Agustinus Purna Irawan, Industrial Engineering Department, Universitas Tarumanagara, Jakarta 11440 Indonesia

**ID 1119 Industry 4.0 Smart Predictive Maintenance in the Oil Industry to Enable Near-Zero Downtime in Operations**

Wejdan Al-Subaiei, Esraa Al-Herz, Wadhha Al-Marri, Rawan Al-Otaibi, Hessah Ashyan, and Hadi Jaber, College of Engineering and Technology, American University of the Middle East, Kuwait

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**Simulation Technical Paper Competition Award**

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**ID 805 Investigating the Efficiency of Centrifugal Pumps via FEA**

Motsi Ephrey Matlakala and Daramy Vandí Von Kallon, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, Johannesburg, South Africa

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**Supply Chain and Logistics Competition Award**

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**1<sup>st</sup> Place****ID 484 Production Planning and Inventory Control Using Artificial Neural Network Forecasting for Furniture Industry 4.0 Custom Production**

Andre Jonathan Christifan and Lina Gozali, Industrial Engineering Department, Universitas Tarumanagara, West Jakarta, 11440, Indonesia

**2<sup>nd</sup> Place****ID 1099 Smart Transaction Picking in Tier-to-tier SBS/RS by Deep Q-Learning**

Bartu Arslan and Banu Yetkin Ekren, Department of Industrial Engineering, Yasar University, Izmir, Turkey

**3<sup>rd</sup> Place**

**ID 492 Production Planning and Capacity Control with Demand Forecasting Using Artificial Neural Network (Case Study PT. Dynaplast) for Industry 4.0**

Priskila Abigail Gunawan and Lina Gozali, Industrial Engineering Department, Universitas Tarumanagara, West Jakarta, 11440, Indonesia

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**Lean Six Sigma Competition Award Sponsored by Tooling Tech Group**

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**1<sup>st</sup> Place**

**1) ID 481 Redesigning The Facility Layout With Systematic Layout Planning Method and Lean Manufacturing Approach On The Production Floor At PT. Baruna Trayindo Jaya**

Dino Ramadhan, Lina Gozali, Frans Jusuf Daywin, and Carla Olyvia Doaly, Industrial Engineering Department, Tarumanagara University, Jakarta, Indonesia

**2<sup>nd</sup> Place**

**2) ID 619 Application of Lean Six Sigma to Improve The Food Bank Singapore's Vending Machine Replenishment Process – A Case Study**

Julian See, School of Business, Singapore University of Social Sciences, Singapore, Singapore  
Huay Ling Tay, School of Business, Singapore University of Social Sciences, Singapore, Singapore

**3<sup>rd</sup> Place**

**3) ID 485 Application of Lean Six Sigma in PET Bottle Production Line at P.T. Peace Industrial Packaging**

Sharin Chandra, Student of Industrial Engineering Department, Universitas Tarumanagara, Jakarta, Indonesia  
Lina Gozali, Lecturer of Industrial Engineering Department, Universitas Tarumanagara, Jakarta, Indonesia

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**COVID-19 Competition Award**

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**1<sup>st</sup> Place**

**ID 091 Online Learning Transformation Technology in Higher Education: Challenges & Strategy**

John Tampil Purba, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia

Sidik Budiono, Department of Management Faculty of Economics and Business, Universitas Pelita Harapan, Tangerang-15811, Indonesia

Aleksander Purba, Civil Engineering Department, Faculty of Engineering, Universitas Lampung-Bandar Lampung 35145, Indonesia

**ID 909 Impact of COVID-19 on the U.S. Energy Production**

Rawan K. Asfour and Hazem A. Atlam, Master of Energy Engineering Student, College of Engineering, Effat University, Jeddah, Saudi Arabia

Tayeb Brahimi, College of Engineering, Effat University, Jeddah, Saudi Arabia

**2<sup>nd</sup> Place**

**ID 448 An Agent-based Model of COVID-19 Epidemic to Simulate Spread Effects of Human Behavior Intervention**

Retno Widyaningrum, Arief Rahman, and Najmi Fauzia, Department of Industrial and System Engineering, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

**ID 753 Sentiment Analysis of Indonesian Citizen Compliance Representation in the Covid-19 Pandemic Period**

Engeng Tita Tosida, Erniyati, and Krisna, Department of Computer Science, Universitas Pakuan, Indonesia, Jawa Barat, Indonesia

**3<sup>rd</sup> Place****ID 145 COVID-19 Isolation Tents: Risk Assessment of Standard Safety Protocols in Assembling Tents Outside of Hospitals in the Philippines**

Rhea Ann G. Perez, Elvis Dave M. Santos and Maria Louise C. Valenzuela, Industrial Engineering Department, Technological Institute of the Philippines, 363 P. Casal Street, Quiapo, Manila, Philippines

Janina Elyse A. Reyes, Industrial Engineering Department, Technological Institute of the Philippines, 363 P. Casal, Quiapo Metro Manila, Philippines

**ID 599 Effect of Mask and Workload on Physiological Responses**

Atef Ghaleb, King Saud University, Riyadh, Saudi Arabia

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