



# IEOM Society

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## 2021 IEOM Awards – Sao Paulo, Brazil, April 8, 2021

### IEOM Distinguished Leadership Award

Professor Paulo Roberto Freitas de Carvalho, Director, FACENS University, Sao Paulo, Brazil  
Prof. Eduardo Antonio Modena, Rector/Dean, Federal Institute of Education, Science and Technology, Sao Paulo, Brazil

### IEOM Distinguished Educator Award

Dr. Ximena Córdova Vallejo, Profesora, Colegio de Ciencias e Ingenierías, Politécnico, Universidad San Francisco de Quito, Ecuador  
Dr. Alfonso Reyes, Dean, School of Engineering, University of Los Andes, Bogota, Colombia  
Prof. Dr. Fernando José Barbin Laurindo, Full Professor and Past Department Head, Production Engineering Department, Polytechnic School, University of São Paulo, Sao Paulo, SP, Brazil  
Professor Hildo Meirelles de Souza Filho (Head of Production Engineering), Department of Production Engineering at Federal University of Sao Carlos (UFSCar), SP, Brazil

### Distinguished Industry Achievement Award

Daniel Scuzzarello, Vice President and Country Manager, Siemens Digital Industry Software South America, São Paulo, Brazil  
Ricardo Mourad, Regional Operation Director – South America, Valeo, Sao Paulo, SP, Brazil  
João Luís Frare, MBA, Industrial Engineering Executive Manager, Continental Automotivo do Brasil Ltda, São Paulo, Brazil  
Edinaldo Fancio, Manufacturing, Engineering & Quality Manager, Eaton Corporation, Valinhos, São Paulo, Brazil  
Fábio Soares Freccia, Head of Corporate Logistics Planning, Volkswagen do Brasil, São Bernardo do Campo, São Paulo, Brazil

### Distinguished Professor Award

Dr. Jose Luis Guerrero-Cusuman, Associate Professor of Operations and Information Management, McDonough School of Business, Georgetown University, Washington, D.C., USA  
Dr. Antonio Henriques de Araujo Junior, Professor, Department of Production Engineering, College of Technology, State University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil  
Dr. Fernando Ordoñez, Director, The Department of Industrial Engineering, University of Chile  
Dr. Leandro Rodriguez, Professor in Industrial Engineering, Universidad Nacional de Lomas de Zamora, Argentina

### Outstanding Professor Award

Dr. Victor Viana Céspedes, Professor of Quantitative Methods III and Operations Research en UTEC - Universidad Tecnológica, Uruguay  
Valeria Karina Moreno, Research Professor, Universidad Tecnologica Nacional, Argentina  
Matías Escuder, CINOI, University of Montevideo, Montevideo, Uruguay  
Dr. Boris Herbas, Professor of Manufacturing Engineering, Universidad Catolica Boliviana San Pablo Regional Cochabamba, Bolivia  
Dr. Camille Piponiot, Université de Guyane, UMREcoFoG (Agroparistech, CNRS, Inra, Cirad), Kourou, French Guiana,  
Dr. Cesar Augusto Stoll Quevedo, Associate Professor, Department Of Industrial Engineering, Pontificia Universidad Catolica Del Peru (PUCP), Lima, Peru

### Outstanding Industry Leadership Award

Delano Gefferie, Acting VP Finance at Surinam Airways, Suriname

### Outstanding Academic Award

Dr. D. A. Lachman, Institute for Graduate Studies and Research and Mechanical Engineering Discipline, Anton de Kom University of Suriname, Paramaribo, Suriname

### IEOM Outstanding Researcher Award

Prof. Dr. Sérgio Shimura, Research Coordinator of Sorocaba Campus, Federal Institute of Education, Science and Technology, Sorocaba, Brazil  
Dr. Peter Fernandes Wanke, Associate Professor, Center for Logistics Studies, COPPEAD–e Graduate School of Business Administration, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil  
Prof. Aldo Roberto Ometto, Coordinator of Post Graduate Program of Production Engineering at EESC-USP), Department of Production Engineering at University of São Paulo - Sao Carlos (USP-SC), SP, Brazil  
Dr. Fernando Rojas Zuñiga, Profesor titular en Universidad de Valparaíso, Chile

### Innovation and Entrepreneurship Award

Diego Mariano, CEO, BirminD, Sorocaba, Brazil  
Johanna Trujillo Diaz, Colombia

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## IEOM Woman in Industry and Academia Award

Profa. Dra. Cynthia Fischer, International Affairs Office, Federal Institute of Education, Science and Technology, Sao Paulo, Brazil  
Dr. Marly Monteiro de Carvalho, Full Professor and Head of Production Engineering Department (PRO-USP), University of São Paulo (USP), Polytechnic School, São Paulo, Brazil  
Dr. Lucila M. S. Campos, Associate Professor and Head, Department of Production Engineering and Systems (EPS), Federal University of Santa Catarina (UFSC), Brazil

## IEOM Global Engineering Education Award

Dr.-Ing. Enzo Morosini Frazzon, Associate Professor, Industrial and Systems Engineering Department, Federal University of Santa Catarina (UFSC), Florianópolis – SC, 88040-900, Brazil  
Profa. Dra. Marcia Terra da Silva, Paulista University – UNIP, São Paulo, Brazil  
Dr. Mario Chauca, Advisor reviewer vice-rectorate of research and Researcher Professor, Ricardo Palma University, Santiago de Surco, Peru  
Dr. L. Lashley, Department of Foundation & Education Management, Faculty of Education & Humanities, University of Guyana, Georgetown, Guyana

## IEOM Industry 4.0 Award

Dr. Alejandro G. Frank, Associate Professor, Department of Industrial Engineering, Director of the Organizational Engineering Group (NEO-Núcleo de Engenharia Organizacional) and Chair of Graduate Studies, Industrial Engineering Program, Federal University of Rio Grande do Sul (UFRGS), Research Affiliate, MIT Industrial Performance Center  
Profa. MSc. Eliane Regina Rodrigues Message, ZorfaTec, São Paulo, Brazil  
Carlos Tunes, Watson IoT Executive – Latin America, IBM, São Paulo, Brazil

## Industry Solutions Award

Cláudio Araujo Rocha, Senior Consultant of D&L Associates, Head of Powertrain Manufacturing LATAM / Powertrain Manufacturing Director (retired), FCA Fiat Chrysler Automobiles LATAM, Brazil  
Marco Santos, MBB, MBA, Master Black Belt, ZF do Brasil, Sorocaba, São Paulo, Brazil  
Urvin Lalay, Director at Applied Engineering & Consulting, Suriname

## IEOM Industry 4.0 Education Award

Dr. Antonio Carlos Gomes Junior, Coordenador de Engenharia Mecânica e Centro 4.0 / Assessor Diretoria, Centro Universitário FACENS, Sorocaba, São Paulo, Brazil

## IEOM Teaching Excellence Award – IE & OM

Prof. Dr. Renato de Oliveira Moraes, Department of Production Engineering, USP – Poli, SP, Brazil  
Prof. Reginaldo T. Coelho (Nucleus of Advanced Manufacturing, Institute Factory of Millennium), Department of Production Engineering at University of São Paulo - Sao Carlos (USP-SC), SP, Brazil  
Prof. Dr. Roberto Antonio Martins, Department of Production Engineering at Federal University of Sao Carlos (UFSCar), SP, Brazil  
A. Fontaine, Université de Guyane, Cayenne, French Guiana

## IEOM Distinguished Service Award

Prof. Vitor M. Caldana, IFSP – Instituto Federal de São Paulo – Campus Sorocaba, SP, Brazil  
Prof. Dr. Rodrigo Luiz Gigante, Coordinator of Production Engineering, FACENS University, Sorocaba, Sao Paulo, Brazil

## IEOM Outstanding Service Award

Dr. Henrique Vieira, FACENS University, Sorocaba, Sao Paulo, Brazil  
Prof. Dr. José Lázaro Ferraz, FATEC – Faculdade de Tecnologia de Sorocaba, Sorocaba, Sao Paulo, Brazil  
Dr. Lucila Campos, Department of Production Engineering, Federal University of Santa Catarina (UFSC), Florianópolis, SC, Brazil

## IEOM Society Awards

Victor H. Molina, Grupo de Decisiones e Innovacion, Facultad de Ciencia e Ingenieria en Alimentos, Universidad Tecnica de Ambato, Ecuador  
Dr. Ebert Brea, School of Industrial Engineering (SIE), Catholic University Andrés Bello (UCAB), Caracas 1000, Capital District, Venezuela  
Dr. Martín Dorante, Head of Professional Practices, School of Industrial Engineering, Universidad Católica Andrés Bello, Caracas, Venezuela  
Hernan Nina Hanco, National University of San Antonio Abad, Cusco, Perú  
Nemesio Fernandez Ferreira, Professor, Universidad del Cono Sur de las Américas, Paraguay  
Jorge Kurita, Universidad Nacional de Asunción, San Lorenzo, Paraguay  
Dr. Fábio D. Giraldo, System and Computer Engineer, University of Quindío, Quindío, Colombia  
Dr. Hernando Garzón Sáenz, Research Professor, Industrial Engineering, Technology in Industrial Production, Fundación Universitaria Tecnológico Comfenalco, Cartagena, Bolívar, Colombia  
Ing. Oscar Alejandro Vásquez Bernal, Associate Professor, School of Basic Sciences, Technology and Engineering, Universidad Nacional Abierta y a Distancia UNAD, Bogotá D.C. Colombia  
Ana Arevalos, National University of Asuncion, San Lorenzo, Paraguay

## IEOM Outstanding Student Award

Anne Karoline, Administration Technical Course, Federal Institute of Education, Science and Technology, Sorocaba, Brazil  
Felippe Kaoan de Sousa Pereira, Facens University, SP, Brazil  
Matheus Augusto Tedesco Cruz Pedroso, Facens University, SP, Brazil

## Undergraduate Student Paper Competition Award Sponsored by SIEMENS

### First

ID 792 Lean after Sales Service: Implementation of the DMAIC methodology in the after-sales processes of an automotive workshop.  
Andrea Michel Chávez Guachamín, University San Francisco de Quito, Quito, Pichincha, Ecuador

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## Second

ID 781 Collaborative Health Resources Management Model

Janus Amaru Leonhardt Gutierrez, Department of Transport Engineering and Logistics, Pontificia Universidad Católica de Chile, Santiago, Chile  
Macarena Paz Navarro Tabilo, Department of Industrial and Systems Engineering, Pontificia Universidad Católica de Chile, Santiago, Chile  
Mathias Alberto Klapp Belmar, Department of Industrial and Systems Engineering, Department of Transport Engineering and Logistics, Pontificia Universidad Católica de Chile, Santiago, Chile

## Third

ID 801 Analysis of the Effects of the Prolonged Standing and Sitting Posture on Physiological Indicators, and the Potential Impact on Health: A Systematic Review and Meta-Analysis

Mateo Maldonado and Nicolás Orbe, Department of Industrial Engineering, Universidad San Francisco de Quito, Cumbayá, Ecuador

## Graduate Student Paper Competition Award sponsored by EATON Corporation

### First

ID 522 Process Reliability Improvement of Slitting Machines in an Industrial Setting

Dolor Roy Enarevba, Modestus O. Okwu, Lagouge K. Tartibu, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa

Chukwuebuka M. U-Dominic, Department of Industrial and Production Engineering, Nnamdi Azikiwe University, Awka, Nigeria.

Ifeyinwa J. Orji, Research Center for Smarter Supply Chain, Dongwu Business School, Soochow University, No. 50 Donghuan Road, Suzhou, Jiangsu 215006, People's Republic of China

### Second

ID 590 Warehouse Performance Measurement with Highly Seasonal Demand and Products with a Long and Short Life Cycle Simultaneously Applying System Dynamics

Diego Ramirez-Malule, Juan Sebastián Jaén-Posada and Juan Guillermo Villegas-Ramirez, Grupo de Investigación ALIADO, Universidad de Antioquia UdeA, Calle 70 No. 52-21, Medellín, Colombia

### Third

ID 548 IIoT Architecture Using LoRa Technologie, LoRaWAN and OPC UA Protocols

Angelo Guimarães Silva, Federal University of Minas Gerais, 6627 Ave. Antônio Carlos, Belo Horizonte, MG 31270-901, Brazil

Hugo César Coelho Michel, Electronic Engineering Department, Federal University of Minas Gerais, Antônio Carlos, Belo Horizonte, MG, Brazil

### Fourth

ID 542 Literature Review and Bibliometry: a Groundwork on Servitization

Gustavo Canaver Pedrinho and Paulo A. Cauchick-Miguel, Graduate Program of Production Engineering

Universidade Federal de Santa Catarina

Florianópolis, SC 88040-900, Brazil

## High School STEM Competition Award

### First

ID 589 Portfolio Management of Social Projects: A case study in IFSP

Anne Karolyne de Almeida Lima and Vitor Mendes Caldana, Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Sorocaba, São Paulo, Brasil

### Second

ID 470 High Altitude Cosmic Radiation Measurement Using Stratospheric Balloon in Sorocaba Region – A STEM Experiment for High School Students

Tiago Ruivo Coelho, Electronics Department, Federal Institute of Education. Science and Technology of Sao Paulo - IFSP Sorocaba Campus, Sorocaba, Brazil

Sergio Shimura, Electronics Department, Federal Institute of Education. Science and Technology of Sao Paulo - IFSP Sorocaba Campus, Sorocaba, Brazil

### Third

ID 771 Impact on Chinese Online Shopping Mall Buyer Purchase Loyalty Using Artificial Intelligence Recommendation Service

Do Won Kim, PAUL MATH SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea, (Supervised by teacher Shin Dong Ho)

### Honorable Mentioned

ID 443 An interdisciplinary approach for the teaching of basic electricity through panels construction

Raphaella Beatriz Barison Secco, Administration technician student integrated to high school, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Sorocaba, Brazil

Diego R. N. Correa, Professor, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Sorocaba, São Paulo, Brazil

ID 444 Modern Practices in the Teaching of Modern and Contemporary Physics as an Initiation Tool for High School Students in the Scientific Career

Maria Luiza Silva Dell Anhol, Administration technician student integrated to high school, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Sorocaba, Brazil

Diego Rafael Nespeque Correa, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Sorocaba, São Paulo, Brazil

ID 445 Study of the surface chemical composition of PEO-treated metallic biomaterials by X-ray photoelectron spectroscopy

Beatriz Isquierdo Pires, Administration technician student integrated to high school, PIBIFSP Scholarship, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo – Campus Sorocaba, São Paulo, Sorocaba, SP, Brazil

Diego R. N. Correa, Professor, IFSP – Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Sorocaba, São Paulo, SP, Brazil

## Doctoral Dissertation Award

### First

ID 290 B2C for Apparel and Home Appliance in Brazil and Canada: A Cost Efficiency Investigation Through A DEA-OCT Model  
Isotilia Costa Melo, Department of Production Engineering, São Carlos Engineering School (EESC)/University of São Paulo (USP), Avenida Trabalhador Sancarlene, 400 – 13566-590 – São Carlos (SP) - Brazil  
Paulo Nocera Alves Junior, Luiz de Queiroz College of Agriculture (ESALQ)/ University of São Paulo (USP), Av. Pádua Dias, 11 – 13418 -900, Piracicaba (SP) – Brazil

### Second

ID 720 Framework to manage academic administrative processes, validating it from the students' perspective. Case study: Faculty of Engineering of a Public University  
Santiago Domingo, Moquillaza Henríquez and Javier Elmer Cabrera Díaz, Academic Department of Computer Science- Universidad Nacional Mayor de San Marcos, Av. German Amezaga s/n Lima 1, Lima, Perú  
Oscar Abraham Morales Da Costa, Academic Department of Industrial Production and Management-Universidad Nacional Mayor de San Marcos, Av. German Amezaga s/n Lima 1, Lima, Perú  
Augusto Ernesto Bernuy Alva, Postgraduate Unit of the Faculty of Systems Engineering and Informatics-Universidad Nacional Mayor de San Marcos, Av. German Amezaga s/n Lima 1, Lima, Perú

## Master Thesis Competition Award

### First

ID 490 Improving Cycle Time of Returnable Packaging Logistics Management in a Philippine Automotive Manufacturing Plant  
Bryan Jay O. Capistrano, Industrial Engineering and Management Department, Polytechnic University of the Philippines  
Rhodora N. Buluran, PUP Graduate School, M.H. del Pilar Campus, Sta. Mesa, Manila 1016, Philippines

### Second

ID 520 The Mediating Impact of Sustainability on the Relationship between Flexible Manufacturing Systems and Operational Performance  
Mohamad Ali Mezher and Raed El-Khalil, Information Technology and Operations Management, Lebanese American University, Beirut, Lebanon

### Third

ID 537 Development of Dimensions and Indicators for Quality Measurement of Mobile Banking Services  
Billy Arma Pratama, Manik Mahachandra, and Heru Prastawa, Department of Industrial Engineering, Diponegoro University, Semarang, Central Java, Indonesia

### Fourth

ID 496 Analytic Study for Subsea Oil Production Optimization Using Lean Concepts  
Hamdy Ahmed Abdel Rahiem, Industrial and Engineering Management Department, Faculty of Engineering and Technology, College of Engineering and Technology, Arab Academy for science Technology and Maritime Transport, Alexandria, Egypt

## Simulation Competition Award

### First

ID 922 Airport Simulation  
Felipe Fraga Santana, Lucca Felippin Rodrigues Faria, Rafael Peres Carnellosi, Tarcisio Antônio Hess Coelho Filho, Henrique Ewbank de M. Vieira and Rodrigo Luiz Gigante, Production Engineering Department, Facens University, Sorocaba, BRAZIL

### Second

ID 923 Chemical Factory Simulation  
Lucas Eduardo Pereira, Fernanda Will, Emerson Watanabe, Izabela Cristina, Henrique Ewbank de M. Vieira, and Rodrigo Luiz Gigante, Production Engineering Department, Facens University, Sorocaba, BRAZIL

### Third

ID 921 Supermarket Simulation  
Alex Andrade, Clara Lorenz, Fernanda Osiro, Miguel Heitor, Pedro Ribeiro, Henrique Ewbank de M. Vieira, and Rodrigo Luiz Gigante, Production Engineering Department, Facens University, Sorocaba, BRAZIL

## Lean Competition Award sponsored by Tooling Tech Group

### First

ID 681 Systematic Literature Review of the application of Lean methodologies in the retail sector  
Luis Bedoya Jimenez, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Peru  
Carlos Chirinos Cuadros, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Peru  
María Teresa Noriega Aranibar, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Peru

### Second

ID 504 Construction of a Parkinson's voice database  
Monica Giuliano, Silvia Noemí Perez, Evangelina Maldonado, Pablo Bondar, Daniela Linari, National University of La Matanza, Buenos Aires, Argentina  
Dario Adamec, Hospital Posadas- Hospital Rivadavia, Argentina  
María Inés Debas, Carlos Morales, Leticia de León, Aldo Yaco, Joice Birelli, Macarena Martínez Ribaya, María Lis Lacaze, Hospital Rivadavia, Servicio de ORL y Fonoaudiología, Ciudad de Buenos Aires, Argentina  
Jorge A. Gurlekian, Laboratorio de Investigaciones Sensoriales-INIGEM-CONICET-UBA, Ciudad de Buenos Aires, Argentina

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## Third

ID 525 Improving the quality and operations of a cable manufacturing company by implementing Six Sigma-DMAIC Technique  
Chukwuebuka M. U-Dominic, Department of Industrial and Production Engineering, Nnamdi Azikiwe University, Awka, Nigeria  
Modestus O. Okwu and Lagouge K. Tartibu, Dolor Roy Enarevba, Department of Mechanical Engineering and Industrial Engineering  
University of Johannesburg, South Africa  
Ifeyinwa J. Orji, Research Center for Smarter Supply Chain, Dongwu Business School, Soochow University, Jiangsu, People's Republic of China

## Supply Chain Competition Award

### First

ID 103 Supply Chain Differentiation: A Quantitative Fuzzy Application to Segment Demand Driven Supply Chains  
Lucas Alves S. Santos and Kleber Francisco Espôsto, Department of Production Engineering, São Carlos School of Engineering, University of São Paulo, São Carlos, Brazil

### Second

ID 777 Traceability Architecture Technology for Short Commercial Exchange  
John Jairo Aguilera Camacho, Angela Maritza Mora Gómez, and Lina Nataly Alvarado Riaño, Research Group EGE, Early Career Researcher  
Grizzly, Fundación Universitaria Compensar, Bogotá D.C., Colombia

## COVID-19 Competition Award

### First

ID 515 Best practices for COVID-19 Test Process in a Hospital Emergency Department  
Jéssica de Assis Dornelles, Jassen Rodrigues da Silva, Patrick Ferreira da Silva, Vicente Colombo Júnior and Laura Visintainer Lerman, Industrial Engineering Department, Federal University of Rio Grande do Sul, Porto Alegre, Brasil

### Second

ID 566 Assessing Disruptive Crises of Supply Chain in Firms Amidst Covid-19: An application of Multi Category-SVM using k-means Clustering  
MD Ariful Islam, Shubho Roy, Nishat Farzana Supriti and Naimur Rahman Chowdhury, Department of Mechanical & Production Engineering,  
Ahsanullah University of Science & Technology, Dhaka, Bangladesh

### Third

ID 724 The Impact of Covid-19 on International Supply Chains Looking Through the SCOR Model  
Luiz Carlos Roque Junior, Ricardo Moreira da Silva, Gabriel Francisco Gauer, Germano Glufke Reis, Guilherme Francisco Frederico, Setor de Ciências Sociais Aplicadas, Universidade Federal do Paraná, Curitiba, Paraná, Brazil

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## Best Track Papers Awards

To be announced