

CONFERENCE PROGRAM

THE 8TH ANNUAL WORLD CONFERENCE OF THE SOCIETY FOR INDUSTRIAL AND SYSTEMS ENGINEERING

17-18 October, 2019
Baltimore, Maryland, USA



EDITORS:

ANAND SUBRAMANIAN, PHD

JEFFREY E. FERNANDEZ, PHD

DARYL L. SANTOS, PHD

PAUL F. EVANGELISTA, PHD

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SISE 2019 CONFERENCE PROGRAM

Date	Time	Event	
Thursday 10/17/2019	9:00 am - 12:00 pm	SISE 2019 Registration	
		Heathrow	
	10:15 am	Welcome Session	
		Heathrow	LAX
		Session 1	Session 2
	10:45 pm - 12:00 pm	Topics in Industrial and Systems Engineering - 1	Manufacturing and Process Improvement
	12:00 pm - 1:30 pm	Lunch Break	
		Heathrow	
		Session 3	
	1:30 pm - 2:45 pm	Remote Presentation - Topics in Industrial and Systems Engineering - 2	
	2:45 pm - 3:00 pm	Coffee Break	
		Expert Panel Discussion with Q&A Session	
	3:00 pm - 4:30 pm	<i>"Future Direction of Industrial and Systems Engineering"</i> Panelists: Nagendra Nagarur, Neal Schmeidler, and Oliver Mannuss Moderator: Jeffrey Fernandez	
	4:30 pm - 4:45 pm	Coffee Break	
	Heathrow	LAX	
	Session 4	Session 5	
4:45 pm - 6:00 pm	Ergonomics in IE	AI and SCM Applications	
6:45 pm - 8:30 pm	SISE 2019 Dinner Banquet Venue: Friendship Ballroom		
Friday 10/18/2019	9:00 am - 10:00 am	SISE 2019 Registration	
		Heathrow	
		Session 6	
	9:00 am - 10:30 am	Remote Presentation	
	10:30 am - 10:45 am	Coffee Break	
		Session 7	
	10:45 am - 12:00 pm	Topics in Industrial and Systems Engineering - 3	
12:00 pm	Conference Adjourns		

SISE 2019 BREAKOUT SESSIONS – Thursday October 17, 2019

1.	Session: S-1: Topics in Industrial and Systems Engineering - 1	Time: 10:45 am – 12:00 pm
	Room: Heathrow	Chair: M Kempf
	Paper Details	
	<ol style="list-style-type: none"> 1. Network Structure and the Effectiveness of Crowd-Based Requirements Processes <ul style="list-style-type: none"> - <i>M Robinson, S Sarkani, and T Mazzuchi</i> 2. School-company Relationship as A Means of Application of Methods Engineering and System Simulation <ul style="list-style-type: none"> - <i>MA Martínez, JA Chi, DC Bacre-Guzman, NM Leal, JA García, JR Maldonado, KE Fuentes, PF Medrano, and AF Castillo</i> 3. Derivative Impacts of the Implementation of Innovation Programs in Companies Located in the State of Puebla, Mexico and its Surroundings <ul style="list-style-type: none"> - <i>LA Gómez-Jaimes and A Gutiérrez</i> 4. Towards a More Complete View of Safety Risks <ul style="list-style-type: none"> - <i>O Mannuß, J Mandel, and A Schloske</i> 5. Optimizing Machining Processes with the Aid of Bayesian Networks <ul style="list-style-type: none"> - <i>M Kempf and K Hitzelberger</i> 	

2.	Session: S-2: Manufacturing and Process Improvement	Time: 10:45 am – 12:00 pm
	Room: LAX	Chair: DL Santos
	Paper Details	
	<ol style="list-style-type: none"> 1. Practical Approach of Value Stream Mapping to Improve Processes in an Automotive Industry <ul style="list-style-type: none"> - <i>EP Puente-Aguilar, M Martínez-Mercado, R Mata-Martínez, P Gómez-Fuentes, and A Vargas-Moreno</i> 2. Reconfiguration of Didactic Conveyor Belt Using Lean Manufacturing Tools <ul style="list-style-type: none"> - <i>DC Bacre-Guzman, JA Chi, NM Leal, MA Martínez, HM Yamalle, S Torres, R López, and L Fernanda</i> 3. Support Vector Machines-Based Abnormality Detection and Prediction in Stencil Printing Process <ul style="list-style-type: none"> - <i>S Alelaumi, H Lu, and SW Yoon</i> 4. Root Cause Analysis of No Shows at a Diagnostics Center and Methods to Reduce Them <ul style="list-style-type: none"> - <i>A Goyal and DL Santos</i> 5. A Qualitative and Quantitative Inspection Analysis of 3D Printed Prototype Parts <ul style="list-style-type: none"> - <i>R Alkhasawneh and DL Santos</i> 	

3.	Session: S-3: Remote Presentation/Topics in Industrial and Systems Engineering - 2	Time: 1:30 pm - 2:45 pm
	Room: Heathrow	Chair: NF Schmeidler
	Paper Details	
	<ol style="list-style-type: none"> 1. Operational Energy Analysis for Dismounted Soldiers <ul style="list-style-type: none"> - <i>V Mittal</i> 2. Soldier and Small Unit Performance Analytics <ul style="list-style-type: none"> - <i>PF Evangelista</i> 3. Level of Implementation of Management Systems, with Emphasis on the ISO 45001 Standard in Companies Located in The State of Puebla, Mexico and its Surroundings <ul style="list-style-type: none"> - <i>LA Gómez-Jaimes and A Gutiérrez</i> 4. SEIR Models for Food Contamination Events <ul style="list-style-type: none"> - <i>J Talley</i> 5. What Can We Learn from the Teamsters? <ul style="list-style-type: none"> - <i>NF Schmeidler</i> 	

SISE 2019 Expert Panel Discussion

Time: 3:00 pm – 4:30 pm

Venue: Heathrow

Title: "Future Direction of Industrial and Systems Engineering" – Moderated by Jeff Fernandez

Panelists

"Trends in Manufacturing and Service sectors and Suggestions for some Future Design Changes to Industrial and Systems Engineering Education"

By Nagen Nagarur

Nagen Nagarur is currently a professor at Binghamton University (State University of New York at Binghamton) in the Department of Systems Science and Industrial Engineering. He had obtained his B. Tech. in Chemical Engineering from REC (NIT) Warangal. He got his MS in Industrial Engineering from Wichita University, Kansas, and Ph. D. in Industrial Engineering and Operations Research from Virginia Tech. Prof. Nagarur was at the Asian Institute of Technology, Thailand, for more than 10 years, including the last two years there as the coordinator of the Industrial and Systems Engineering. At Binghamton University, he served as the chair of the Systems Science and Industrial Engineering Department from 2009-2015. His main research areas are supply chains, applications of operations research, healthcare delivery, and manufacturing. He has several papers in peer-reviewed journals, and so far has served as advisor to more than 17 Ph. D. students and more than 100 MS Thesis students.



"A Practitioner's View"

By Neal Schmeidler

Neal F. Schmeidler is a Manager in the public sector practice of Grant Thornton LLP, Arlington, Va., the U.S. member firm of Grant Thornton International Ltd., one of the world's leading independent audit, tax and advisory firms. His expertise includes human capital planning, productivity and work measurement, management and operational analysis, and statistical analysis and modeling. Schmeidler has applied his skills to the study and analysis of activities such as aircraft maintenance, air traffic control, National Airspace System equipment and systems maintenance, civil aviation security, infrastructure security, oil spill response system testing, aviation safety inspection, preventive medicine, federal services to military veterans, telecommunications services management, electrical power systems acquisition, construction waste recycling, space shuttle orbiter maintenance, and federal services to the commercial space transportation industry. Schmeidler is a member of the Society for Industrial and Systems Engineering (SISE). He is a Fellow of the Washington Academy of Sciences (WAS) and has served on its Board of Managers and on the awards and financial audit committees. He is also a Fellow of the Institute of Industrial and Systems Engineers (IISE) and has served as a region vice president for the IISE and president of the National Capital Chapter and numerous other boards and societies of the IISE. Mr. Schmeidler received a Bachelor of Science degree in Mathematics from Fort Hays State University and a Master of Science degree in Industrial Engineering from Kansas State University.



“The Fourth Industrial Revolution - Future Adaptable Production Systems”

By Oliver Mannuß

Oliver Mannuß works in consulting and research projects in the field of product development systematics and methodology. One focus of his scientific work is in the area of FMEA application and its application to different types of companies. Since 2005 he has served as the Deputy Head of Department for “Sustainable Production and Quality Management” and as the Group Manager for “Quality and Reliability Management”. From 2000 to 2005 he served as a Research Associate at Institute of Industrial Manufacturing and Management (IFF) University Stuttgart. He received his Dipl.-Ing. In Mechanical Engineering from the University Stuttgart. His areas of expertise include automotive (e.g. Daimler, BMW); automotive suppliers (e.g. Bosch, Eberspächer, EDAG); aeronautical engineering (Lufthansa, MTU, Airbus); plant engineering (e.g. FFT, ABB Alstom); machine tools industry (z.B. Trumpf, Walter AG); and medical devices / pharmaceutical industry (e.g. Boehringer Ingelheim, Bosch Packaging, Olöympus medical). His notable research projects include the following:

- European Commission - project TRANSPARENCY (Adaptive Business Collaboration by progressive knowledge sharing and engineering, 2010-2013)
- European Commission - project SELSUS (Health Monitoring and Life-Long Capability Management for SELF-SUStaining Manufacturing Systems, 2013-2017)
- Ministry of Economics Baden-Württemberg: MATRON (Development of save and reliable mechatronical systems)



4.	Session: S-4: Ergonomics in IE	Time: 4:45 pm - 6:00 pm
	Room: Heathrow	Chair: ZJ Harrison
	Paper Details	
	<ol style="list-style-type: none"> 1. A Multi Platform Application Based Tool to Facilitate Ergonomic Assessments and Problem Identification - <i>A Subramanian and JE Fernandez</i> 2. Sanding and Buffing in the Aviation Manufacturing Industry: A Case Study - <i>E Musgrave, T Mead, and B Toma</i> 3. Case Study of an Ergonomic Assessment for Aircraft Hull Assembly - <i>I McCandliss, L McCullerses, A Stets, and A Subramanian</i> 4. Muscle Recruitment Strategy for Musculoskeletal Modeling of the Shoulder - <i>CW Moore and AD Nimbarte</i> 5. Development of a Predictive Equation to Estimate Strain at the Shoulder - <i>CW Moore and AD Nimbarte</i> 	

5.	Session: S-5: AI and SCM Applications	Time: 4:45 pm - 6:00 pm
	Room: LAX	Chair: SW Yoon
	Paper Details	
	<ol style="list-style-type: none"> 1. Lay-out Proposal in Capstone Project, Supported by Virtual Reality to get the K ABET Outcome - <i>JM Hernández-Ramos, C Solís-Peña, SG Elizondo-Arroyave, MA Mendoza-García, V Lara-Jiménez, and AL Hernández-Sustaita</i> 2. Proposal to redesign a process flow through the use of Augmented Reality - <i>JM Hernández-Ramos, C Solís-Peña, JA Chi-Tapia, IG González-Palomo, SG Elizondo-Arroyave, and J Cuellar-Celestino</i> 3. Optimal Decisions for the Perishable Food Supply Chain by Applying Blockchain Technology - <i>S Abedi and SW Yoon</i> 4. Solving Capacitated Vehicle Routing Problem Using Two Phase Heuristic Method - <i>LZ Tarawneh, MD Serhan, and SW Yoon</i> 5. Techno-Economic Feasibility of Rooftop Photovoltaic Systems over Gas Stations in New York State - <i>YM Alwesabi, Y Wang, and SW Yoon</i> 	

SISE 2019 Dinner Banquet	Time: 6:45 pm – 8:00 pm
Room: Friendship Ballroom	

SISE 2019 BREAKOUT SESSIONS – Friday October 18, 2019

6.	Session: S-6: Remote Presentations	Time: 9:00 am – 10:30 am
	Room: Heathrow	Chair: A Subramanian
	Paper Details	
	<ol style="list-style-type: none"> 1. A Heuristic Approach for the Dynamic Vehicle Routing Problem - <i>M Abdirad and K Krishnan</i> 2. Industry 4.0 in Logistics and Supply Chain Management Using Topic Modeling Method - <i>M Abdirad and K Krishnan</i> 3. Simulation Based Decision Framework for Hybrid Layout Production Systems under Disruptions - <i>V Vijayan, R Harikrishnakumar, and K Krishnan</i> 4. Simulation Model for Multi-Echelon Multi-Depot Supply Chain System - <i>R Rajkumar, R Harikrishnakumar, and K Krishnan</i> 	

7.	Session: S-7: Topics in Industrial and Systems Engineering - 3	Time: 10:45 am – 12:00 pm
	Room: Heathrow	Chair: JE Fernandez
	Paper Details	
	<ol style="list-style-type: none"> 1. Implementation of Statistical Model in the Machining of Superalloys - <i>S Dominguez-Rueda, I Escamilla-Salazar, and B Gonzalez-Ortiz</i> 2. Development of Computer Aided Machining (CAM) from Computer Aided Design (CAD) - <i>S Dominguez-Rueda, K Escamilla-Salazar, and I Escamilla-Salazar</i> 3. Analysis of the Repeatability and Reproducibility (R&R) in the Surface Roughness of the “Alloy X” in Milling Process - <i>S Dominguez-Rueda, I Escamilla-Salazar, and B Gonzalez-Ortiz</i> 	

