**Paper Title (18 font bold center)**

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**Ahad Ali and Don Reimer**

A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering (12 font center)

Lawrence Technological University

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**Paper Title**

* 18 font with bold and center justification
* All titles should be in standard mixed case, where the first letter of each word is capitalized and followed by lower case letters, as noted below:

**Lean Manufacturing, Operations Management and Six Sigma Applications**

**Authors and Affiliations**

* Author name – 12 font with bold and center justification
* Affiliation – 12 font with center justification
* Authors with same affiliation should be together
* Authors with different affiliation should be listed separately with one space in between
* Email can be added for each author
* Single space between affiliation and abstract title

**Abstract (12 font)**

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* Abstract title  – 12 font with bold and center justification
* Abstract text – 10 font with full justification
* Not exceeding 250 words.

**Keywords (12 font)**

Keyword 1, Keyword 2, Keyword 3, Keyword 4 and Keyword 5. (10 font)

* No more than five keywords (10 font)

## 1. Introduction (12 font)

## Add introduction here including motivation of the research (why this research is important / why this research is needed), and problem statements. (10 font)

## 1.1 Objectives (11 font)

## Add research objectives here. Make sure to fulfil all the research objectives at the end and articulate in the conclusion. Focus on key unique research contributions (10 font)

## 2. Literature Review (12 font)

## Add literature review here (10 font)

## 3. Methods (12 font)

## Add methods here (10 font)

## 4. Data Collection (12 font)

## Add data collection here. (10 font)

## 5. Results and Discussion (12 font)

## 5.1 Numerical Results (11 font)

## Add numerical results here. Make sure to describe all tables and add inferences (10 font)

## 5.2 Graphical Results (11 font)

## Add graphical results here. Make sure to describe all figures and add inferences. If needed, add statistical analysis here. (10 font)

## 5.3 Proposed Improvements (11 font)

## Add propose improvements write here including additional numerical and graphical results (10 font)

## 5.4 Validation (11 font)

## Add any validation here including improvement with statistical hypothesis tests write here (10 font)

## 6. Conclusion (12 font)

## Add conclusion here. Make sure to address that all objectives are met and emphasize of unique research contribution (10 font)

## References (12 font)

## Add references here. Make sure to follow IEOM reference format. See details at the end. (10 font)

Rahman, M. A., Sarker, B. R. and Escobar, L. A., Peak demand forecasting for a seasonal product using Bayesian approach, *Journal of the Operational Research Society*, vol. 62, pp. 1019-1028, 2011.

Reimer, D., Entrepreneurship and Innovation, Available: http://www.ieomsociet.org/ieom/newsletters/, July 2020.

Reimer, D. and Ali, A., Engineering education and the entrepreneurial mindset at Lawrence Tech, *Proceedings of the 3rd Annual International Conference on Industrial Engineering and Operations Management*, Istanbul, Turkey, July 3 – 6, 2012, pp. xx-xx.

Reimer, D., Title of the paper, *Proceedings of the 5th North American International Conference on Industrial Engineering and Operations Management*, Detroit, Michigan, USA, August 10-14, 2020, pp. xx-xx.

Shetty, D., Ali, A. and Cummings, R., A model to assess lean thinking manufacturing initiatives, *International Journal of Lean Six Sigma*, vol. 1, no. 4, pp. 310-334, 2010.

**Biography (12 font)**

Add each author biography – limited to 250 words. (10 font)

## Page Layout

* 8 1/2" X 11" paper
* All margins: 1.00"
* Full justification
* Times New Roman font
* Maximum 12 pages
* Single space for entire manuscript
* Each paper should have abstract, introduction, literature review with minimum 15 citations including some recent publications, methods, data analysis, numerical and graphical results, statistical analysis, validation, conclusion and references.
* Conference name as a header and copyright information as footer must be used. Copyright information implies that IEOM Society International has right to publication the paper

 **1. Headings (12 font)**

* 12 font size with bold and left justification
* Header should have numbering

## 1.1 Sub-Headings (11 font)

* Title – 11 font with sub-numbering
* Text – 10 font with no indexing
* One space between paragraphs

**Literature Review**

If author is mentioned at the beginning for the citation:

Rener (2020) developed the SC network with uncertainty. - For Single author

Rener and Ali (2020) developed the SC network with uncertainty. - For two authors

Rener et al. (2020) developed the SC network with uncertainty. - For more than two authors

or if author is mentioned at the end for the citation:

SC network was developed with uncertainty (Rener 2020). - For single author

SC network was developed with uncertainty (Rener and Ali 2020). - For two authors

SC network was developed with uncertainty (Rener et al. 2020). - For more than two authors

**Full details should be provided at the end for Reference Section:**

Rener, A., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, 2020.

Rener, A. and Ali, A., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, 2020.

Rener, A., Ali, A. and Reimer, D., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, 2020.

**Few aspects to be considered to prepare a literature review:**

* Introductory write up for literature review
* Make sure to add some recent references
* Avoid paper-by-paper review. It should be based on category. Similar topics, applications or tools could be added in one paragraph. Few citations should be in a paragraph.
* A summary paragraph should be added.

**Figures**

* Texts of figure should be readable
* Original high quality pictures
* Center justification
* Title of Figure should be in center and it must be mentioned as “Figure x: …”
* Title of figure should be sentence case with center justification and 10 font
* Title should be after figure
* All figure numbers must be mentioned in the body of the paper.
* One space between texts and figure, figure and title of the figure and title of the figure and texts.

Figure 1. Name of the figure

**Tables**

* Texts of table should be readable
* Center justification
* Title of table should be in center and it must be mentioned as “Table x: …” It should be added before table.
* Title of table should be sentence case with center justification and 10 font size
* All table numbers must be mentioned in the body of the paper.
* One space between texts and table, table and title of the table and title of the table and texts.

Table 1. Name of the table

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**Equations**

Equation numbering is optional.

## Acknowledgements

Add acknowledgement if needed

**IEOM Reference Format**

**Citation Styles**

If author is mentioned at the beginning for the citation, use the below format:

Rener (2020) developed the SC network with uncertainty. - For Single author

Rener and Ali (2020) developed the SC network with uncertainty. - For two authors

Rener et al. (2020) developed the SC network with uncertainty. - For more than two authors

If author is mentioned at the end for the citation, use the below format:

SC network was developed with uncertainty (Rener 2020). - For single author

SC network was developed with uncertainty (Rener and Ali 2020). - For two authors

SC network was developed with uncertainty (Rener et al. 2020). - For more than two authors

**Full details should be provided at the end for Reference Section:**

Rener, A., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, 2020.

Rener, A. and Ali, A., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, 2020.

Rener, A., Ali, A. and Reimer, D., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, 2020.

## References Guidelines

* References title – 12 font with bold and left justification
* References texts – 10 font
* Use single space
* No empty line between two references
* No numbering should be used for references
* Last name and year should be used for any reference citation. Last name and year should be used for single author and double authors. For more than two authors, last name of the first author and “et al.” with year should be used. For examples: Reimer (2009), (Reimer 2009), Reimer and Ali (2009), (Reimer and Ali 2009), Reimer et al. (2009) and (Reimer et al. 2009). Number is not allowed in the reference citation.
* All references must be cited in the paper.
* Journal and conference names should in italic.
* Title of the book should be in italic.
* All lines after the first line of references list should be indented one-fourth (1/4) inch from the left margin. This is called hanging indentation.
* Below are some examples.

**For journal papers**

One author

Last name, first initial., Title of the paper, *Journal Name*, vol., no., pp., year.

Lee, J., Measurement of machine performance degradation using a neural network model, *International Journal of Modelling and Simulation*, vol.16, no. 4, pp. 192-199, 1996.

Two author (more authors will have similar format with addition authors)

Last name, first initial. and last name, first initial., Title of the paper, *Journal/Conference Name*, vol., no., pp, year.

Cook, V. and Ali, A., End-of-line inspection for annoying noises in automobiles: trends and perspectives, *Applied Acoustic*, vol. 73, no. 3, pp. 265-275, 2012.

Rahman, M. A., Sarker, B. R. and Escobar, L. A., Peak demand forecasting for a seasonal product using Bayesian approach, *Journal of the Operational Research Society*, vol. 62, pp. 1019-1028, 2011.

Reimer, D., and Ali, A., Engineering education and the entrepreneurial mindset at Lawrence Tech, *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Istanbul, Turkey, July 3 – 6, 2012.

Shetty, D., Ali, A. and Cummings, R., A model to assess lean thinking manufacturing initiatives, *International Journal of Lean Six Sigma*, vol. 1, no. 4, pp. 310-334, 2010.

**For conference papers**

One author

Last name, first initial. Title of the paper, *Conference Name*, pp. xx-xx, city, country, dates, year.

Reimer, D., Entrepreneurship learning experiences, *Proceedings of the 12th Annual International Conference on Industrial Engineering and Operations Management*, pp. xx-xx, Istanbul, Turkey, March 7-10, 2022.

O’Neill, E., Introduction to Improving Adaptive Snow-Sports through Engineering Design, Ergonomic Form and Function, *Proceedings of the 4th North American International Conference on Industrial Engineering and Operations Management*, pp. 1486-1487, Toronto, Canada, October 23-25, 2019.

Two author (more authors will have similar format with addition authors)

Last name, first initial. and last name, first initial., Title of the paper, *Conference Name*, pp. xx-xx, city, country, dates, year.

Aghimien, D. and Aigbavboa, C., Performance of selected funding schemes used in delivering educational buildings in Nigeria, *Proceedings of the 3rd North American International Conference on Industrial Engineering and Operations Management*, pp. 108-119, Washington DC, USA, September 27-29, 2018.

Motsepe, Y. A., Makhanya, B. and Pretorius, J.H.C., Exploring the impact project definition readiness index on capital projects for coal-fired power station projects, *Proceedings of the First African International Conference on Industrial Engineering and Operations Management*, pp. 638-649, Pretoria, South Africa, October 29 – November 1, 2018.

**For books**

Last Name, First Initial. and Last Name, First Initial., *Title of the book*, edition, publisher, year.

Chang, T., Wysk, R. and Wang, H., *Computer-Aided Manufacturing*, 3rd Edition, Prentice Hall, New Jersey, 2006.

**For website**

Last Name, First Initial. and Last Name, First Initial., Article title article title article title article title article title, Available: http://www.ieomsociety.org/Details.aspx?id=xxx, May 21, 2019. If the author's name is not listed, begin with the title of the article for citation.

Name of the website, Available: http://www.ieomsociety.org/Details.aspx?id=xxx, Accessed on May 21, 2019.

**For Newspaper**

Last Name, First Initial. and Last Name, First Initial., Newspaper article title, date of publication, URL. Accessed Month Day, Year. If the author's name is not listed, begin with the title of the newspaper article for citation.

**All references should be organized alphabetically**

**References**

Aghimien, D. and Aigbavboa, C., Performance of selected funding schemes used in delivering educational buildings in Nigeria, *Proceedings of the 3rd North American International Conference on Industrial Engineering and Operations Management*, pp. 108-119, Washington DC, USA, September 27-29, 2018.

Ali, A. and Rener, A., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, year.

Chang, T., Wysk, R. and Wang, H., *Computer-Aided Manufacturing*, 3rd Edition, Prentice Hall, New Jersey, 2006.

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Krstovski, S., Quality index, www.ieomsociety.org/newsletter/. Accessed May 21, 2020.

Lee, J., Measurement of machine performance degradation using a neural network model, *International Journal of Modelling and Simulation*, vol.16, no. 4, pp. 192-199, 1996.

Masud, A.S.M. and Whitman, L.E., Educating future engineers: An example, *Proceedings of the First International Conference on Industrial Engineering and Operations Management*, pp. 175-179, Dhaka, Bangladesh, January 9 – 10, 2010.

Motsepe, Y. A., Makhanya, B. and Pretorius, J.H.C., Exploring the impact project definition readiness index on capital projects for coal-fired power station projects, *Proceedings of the First African International Conference on Industrial Engineering and Operations Management*, pp. 638-649, Pretoria, South Africa, October 29 – November 1, 2018.

O’Neill, E., Introduction to Improving Adaptive Snow-Sports through Engineering Design, Ergonomic Form and Function, *Proceedings of the 4th North American International Conference on Industrial Engineering and Operations Management*, pp. 1486-1487, Toronto, Canada, October 23-25, 2019.

Rahman, M. A., Sarker, B. R. and Escobar, L. A., Peak demand forecasting for a seasonal product using Bayesian approach, *Journal of the Operational Research Society*, vol. 62, pp. 1019-1028, 2011.

Reimer, D., and Ali, A., Engineering education and the entrepreneurial mindset at Lawrence Tech, *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Istanbul, Turkey, July 3 – 6, 2012.

Reimer, D., Entrepreneurship learning experiences, *Proceedings of the 12th Annual International Conference on Industrial Engineering and Operations Management*, pp. xx-xx, Istanbul, Turkey, March 7-10, 2022.

Reimer, D., Entrepreneurship, innovation and experiential learning, Available: http://www.ieomsociety.org/id=xxx, May 21, 2019.

Rener, A., Ali, A. and Reimer, D., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, year.

Rener, A., Optimization of the supply chain network using uncertainty, *International Journal of Industrial Engineering and Operations Management*, vol. xx, no. xx, year.

Retnanto, A., Parsaei, H.R. and Parsaei, B., The role of program advisory board in elevating the degree program content *Proceedings of the 9th International Conference on Industrial Engineering and Operations Management,* pp. 739-741, Bangkok, Thailand, March 5-7, 2019.

Shetty, D., Ali, A. and Cummings, R., A model to assess lean thinking manufacturing initiatives, *International Journal of Lean Six Sigma*, vol. 1, no. 4, pp. 310-334, 2010.

# Biography / Biographies (for single author – biography and multiple authors- biographies) – 12 font bold

* Include bio of each author at the end of the paper
* Limited to 250 words

**Dr. Shahram Taj** joined Florida Polytechnic University in August 2016 as a professor of logistics and supply chain management. He served as the academic program coordinator of science and technology management and the academic program coordinator of graduate programs in 2017. Since January 2018, he has served as the chair of the department of data science and business analytics. Taj has extensive tenure in academia. He was professor and chair of the Department of Management and Marketing at Lawrence Technological University in Michigan from2013 to 2016. He served as The Cameron Endowed Chair of Management and Marketing at the University of St. Thomas in Houston from 2008 to 2013. Taj previously taught for more than 20 years at the University of Detroit Mercy. Taj has conducted more than 100 projects at Ford, Visteon, New Venture Gear (formerly joint venture of GM and DaimlerChrysler), GM-Holden, Baker Hughes, and Schlumberger in the United States, Germany, Australia, and Japan. The projects have covered productivity improvements, implementing lean manufacturing, and optimizing process design. In 1999, he earned the Franz Edelman Finalist Award for Achievement in Operations Research/Management Science for projects that resulted in $15.5 million capital savings and a profit increase of more than $2 billion for Ford Motor Company. Taj has served as thesis advisor/reader of more than 100 graduate students at the University of Detroit Mercy, including a doctoral thesis committee at MIT. He served as the track chair of the “Lean Manufacturing, Manufacturing Information Management, Supply Chain, and Product Development” for the SAE International in Ireland, Spain, and France. He has published 68 refereed articles in journals and proceedings of many international conferences. Recently, he published several articles on the adaptation of lean production in China, and most recently in areas of sustainability and business model innovation.

**Ahmad K. Elshennawy**, Ph.D. is Professor and Executive Director of The UCF Quality Institute in the Department of Industrial Engineering and Management Systems at the University of Central Florida (UCF). Prior to joining UCF, he served as a Guest Researcher with the Precision Engineering Division of the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland for two years. Dr. Elshennawy combines over 30 years of international experience with exemplary academic record in the areas of quality management and strategic improvement, as a researcher, academician and a consultant in the United States and different parts of the world. He is the co-author of the Certified Quality Engineer Handbook (1st and 2nd Editions), the Certified Quality Technician Handbook, and the Certified Quality Inspector Handbook (ASQ publications) and Manufacturing Processes and Materials (SME publication). Elshennawy received a BS and MS degrees in Production Engineering from Alexandria University and M.Eng. & Ph.D. degrees in Industrial Engineering from Penn State University. His teaching and research areas of expertise include Quality and Reliability Engineering, Quality Systems and Management, Six Sigma Quality/Lean Six Sigma, Statistical Process Control, Lean Service, and Business and process Performance Improvement and Management. Elshennawy is a Fellow of the American Society for Quality (ASQ), Senior Member of the Institute of Industrial Engineers (IIE), and the Society of Manufacturing Engineers (SME). He is an ASQ Certified Quality Engineer (CQE) and a Certified Reliability Engineer (CRE) and is a Certified Lean Six Sigma Master Black Belt. Dr. Elshennawy has served on the Editorial Review Board of Quality Press of the American Society for Quality and currently serves on the Editorial Board of Quality Progress and is a Senior Editor for the Journal of management and Engineering Integration. He is also the Director of Development and Quality Control of the Association for Industry, Engineering, and Management Systems (AIEMS).

**Ahad Ali** is an Associate Professor and Director of Industrial Engineering Program in the A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering at the Lawrence Technological University, Southfield, Michigan, USA. He earned B.S. in Mechanical Engineering from Khulna University of Engineering and Technology, Bangladesh, Masters in Systems and Engineering Management from Nanyang Technological University, Singapore and PhD in Industrial Engineering from University of Wisconsin-Milwaukee. He has published journal and conference papers. Dr Ali has completed research projects with Chrysler, Ford, New Center Stamping, Whelan Co., Progressive Metal Manufacturing Company, Whitlam Label Company, DTE Energy, Delphi Automotive System, GE Medical Systems, Harley-Davidson Motor Company, International Truck and Engine Corporation (ITEC), National/Panasonic Electronics, and Rockwell Automation. His research interests include manufacturing, simulation, optimization, reliability, scheduling, manufacturing, and lean. He is member of IEOM, INFORMS, SME and IEEE.

**Donald M. Reimer** is the managing member of The Small Business Strategy Group, L.L.C and serves as an adjunct professor at Lawrence Technological University**.** Mr. Reimer holds a Bachelor of Science degree in Industrial Management from Lawrence Technological University and a Master of Arts degree in Political Science from University of Detroit/Mercy. He has been recognized as a professional management consultant with over 45 years of experience in working with closely-held businesses. He has taught courses in entrepreneurship, management and corporate entrepreneurship and innovation for engineers. Mr. Reimer served as member of the Minority Economic Development Committee of New Detroit. He has served as a KEEN Fellow for The Kern Family Foundation. He is member of the Lawrence Tech Alumni Board of Directors and has elected a Fellow of the IEOM Society International. Mr. Reimer is a faculty advisor of the Student Chapter of the IEOM Society at Lawrence Tech.