#### Fernando Gonzalez Aleu, Ph.D.

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September 2022

# **EDUCATION**

## 2016 Industrial and Systems Engineering, Ph.D.,

Area of specialty: Management System Engineering

Virginia Tech, Blacksburg, VA,

Thesis: "An Empirical Investigation of Continuous Improvement Projects in Hospitals"

## 2015 Industrial and Systems Engineering, M.Sc.

Area of specialty: Management System Engineering

Virginia Tech, Blacksburg VA

#### 1999 Manufacturing Systems, M. Sc.

Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, NL., México Thesis: "Improve a quality system assurance (ISO 9001:1994) with Total Quality Management"

#### 1993 Mechanical and Management Engineering, B.D.

Universidad de Monterrey (UDEM), San Pedro Garza García, NL., México Thesis: "Design and construction of a raw cultivator for John Deere"

# EDUCATION AND PEDAGOLOGY TRAINING

#### **CERTIFICATIONS**

- **2018 Pedagogical Model UDEM** (120 hours), Universidad de Monterrey, San Pedro Garza García, N.L., Expiration date: Do not expire
- **2014 Future Professorate** (96 hours). Virginia Tech, Blacksburg, VA. Expiration date: Do not expire

#### **COURSES**

- **2021** Leaders of Learning (20 hours), HarvardX, online
- **2020** Principals and Values UDEM (2 hours), Universidad de Monterrey, online
- **2020** Neurociencia (9 hours), Universidad de Monterrey, online
- **2020** Gamification (30 hours), Wharton University of Pennsylvania, online

- **Deep Learning through Transformative Pedagogy** (12 hours), The University of Queensland, online
- **2019 Gamification** (6 hours). Universidad de Monterrey, San Pedro Garza García, N.L. México
- **2019 Pedagogical Session** (4 hours), Universidad de Monterrey, San Pedro Garza García, N.L., México
- **2018** Challenge to Innovate in Higher Education (7 hours), Universidad de Chile, online
- **2018 Pedagogical Session** (4 hours), Universidad de Monterrey, San Pedro Garza García, N.L., México

# PROFESSIONAL TRAINING

#### **CERTIFICATIONS**

**Professional in Engineering Management** (by professional experience), American Society for Engineering Management, Huntsville, AL, Certification number:20042020CPEM0001, Valid through: 17 April 2023

## SEMINARS AND CONFERENCE

- **2019 IISE Annual Conference and Expo 2019** (32 hours), May 18 21, Orlando, FL
- **2019 IEOM Annual Conference 2019** (24 hours), March 5 7, Bangkok, Thailand
- 2018 IISE Annual Conference and Expo 2018 (32 hours), May 19-22, Orlando, FL
- **2018 IEOM Annual Conference 2018** (24 hours), March 6 8, Bandung, Indonesia
- **2018** Engineering Forum 2018 (16 hours), Universidad de Monterrey, Monterrey, N.L.
- **2017 IISE Annual Conference and Expo 2017** (32 hours), May 19 22, Pittsburg, PA,
- **2017 IEOM Annual Conference 2017** (24 hours), March 10-14, Rabat, Morroco
- **2016 Healthcare Systems Process Improvement Conference 2016** (24 hours), February 24 26, Houston, TX
- 2015 IIE Annual Conference and Expo 2015 (32 hours), May 30 June 2, Nashville, TN

## **COURSES**

- **2021** Toyota Production System Level 5 (12 hours), ASEMEJA and JICA, online
- **2021 Demand Driven Planner** (20 hours), Demand Driven Institute, online
- **2020** Analytics and Data Science (96 hours), Universidad de Monterrey, San Pedro Garza García, N.L., México
- 2020 Shiftup Business Agility and Innovation Leader (16 hours), Enevasys, online
- **Leading Healthcare Quality and Safety** (5 hours), The George Washington University, online
- **2020** Agile Meets Design Thinking (10 hours), University of Virginia, online
- **2020 ISO 45001** (4.5 hours), Udemy, online
- **2019** Lean Production (24 hours), Technische Universität München, online
- **2019 Sigma Sigma: Define and Measure** (32 hours), Technische Universität München, online

2018	Systems Thinking in Public Health (12 hours), Johns Hopkins, online
2017	Practical Improvement Science in Health Care (35 hours), HarvardX, online
2017	<b>Discovery Excellence</b> (16 hours), Shingo Institute, Atlanta, GE.
2004	ISO TS16949 Second Part Auditor (24 hours). Plexus, Monterrey, NL., México
2003	ISO 9000:2000 Leader Auditor (40 hours). Societe Generale de Surveillance, México
2003	ISO 14000 Leader Auditor (40 hours). Societe Generale de Surveillance, México
2000	Management Skill (16 hours). Gustav Kaeser, Monterrey, NL., México
1999	Effective Negotiation (16 hours). Karrass, Monterrey, NL., México
1998	Six Sigma Green Belt (48 hours). General Electric, Monterrey, N.L., México
1997	<b>Theory of Constrains</b> (40 hours). Goldratt Institute, New Haven, CT

# **ACADEMIC EXPERIENCE**

#### **TEACHING**

**2008 – Present** 

## **Universidad de Monterrey (UDEM)**

Department of Engineering San Pedro Garza García, N.L., México

## Associate Professor and Researcher (2015 – Present)

- Master's course taught: Research Seminar
- Undergraduate courses taught: Quality, Productivity and Competitiveness, Industrial Safety, Theory of Systems, and Engineering Methods
- Thesis advisor: Master's level and Undergraduate level
- Student chapter advisor: American Society for Quality

## Professor in Training (2010 – 2014)

• Selected by Human Resources as member of the Professor-in-Training Program to pursue a Ph.D. in top-ranked university (Virginia Tech)

# <u>Director of the Industrial and Systems Engineering Undergraduate</u> <u>Program and Faculty (2008 – 2010)</u>

- Undergraduate course taught: Quality Systems
- Thesis advisor: undergraduate level
- Student chapter advisor: Institute of Industrial Engineering and American Society for Quality

#### **2010 – 2014 Virginia Tech**

Department of Industrial and Systems Engineering Blacksburg, VA

## <u>Graduate Teaching Assistant (2012 – 2014)</u>

- Contract: 20 hours per week each semester
- Undergraduate courses supported: Senior Design, Engineering Economy, and Undergraduate Research Seminar
- Responsible for creating undergraduate program annual program assessment report (to support maintaining ABET accreditation)

#### **2005** Ibero

Business Department Saltillo, Coahuila., México

#### Part-Time Professor

• Master's course taught: Quality Management

## 1994 – 2004 Universidad de Monterrey (UDEM)

Department of Engineering San Pedro Garza García, N.L., México

#### Part-Time Professor

- Undergraduate courses taught: Technical Drawing, Introduction to Industrial Engineering, Manufacturing Process Laboratory, Quality Systems, Modern Quality Focus, Quality Assurance, and Quality Senior Project Design
- Thesis advisor: Undergraduate level

#### **ADMINISTRATIVE**

#### 2008 – 2010 Universidad de Monterrey (UDEM)

Department of Engineering San Pedro Garza García, N.L., México

# Director of the Industrial and Systems Engineering Undergraduate Program and Faculty (2008 – 2010).

- Responsible for freshman year recruiting and follow-up for more than 400 ISE students
- Responsible for updating the ISE curriculum
- Major achievements: increase freshman enrollment by 5% and approva of study abroad program with SUNY at Binghamton

#### THESIS ADVISOR

1998 – Present Universidad de Monterrey

#### San Pedro Garza García, N.L., México

#### Graduate Level

- 1. M. Guzman (2021). Correlation Study Between Porosity and Thermic Conductivity in Ceramic Materials (Master's thesis: Universidad de Monterrey)
- 2. A.D. Solis (2020). *Quality Cost Reduction in the Remanufacturing Process of Water Bombs* (Master's thesis: Universidad de Monterrey)
- 3. F.D. Mendoza (2020). Business Intelligence for Process Management in Steel Transformation Company (Master's thesis: Universidad de Monterrey)
- 4. J.M. Villarreal (2020). Assessing Maturity of Operational Excellence (Master's thesis: Universidad de Monterrey)
- 5. C. Rodriguez (2019). *Quality Improvement Projects in Catheterization Laboratories: A Systematic Literature Review* (Master's thesis: Universidad de Monterrey)
- 6. L. L. Carrillo (2019). *Reduction of the Variation in the Determination of Insecticide Purity* (Master's thesis: Universidad de Monterrey)

## <u>Undergraduate Level</u>

- 1. R. Alcaraz, C. Cantu, and H. Treviño (2020). *Productivity Increase in a Tier One Automotive Supplier* (Undergraduate thesis: Universidad de Monterrey)
- 2. R.J. Salazar (2019). Systematic Literature Review of Data Science, Data Analytics, and Machine Learning Applied to Healthcare Engineering Systems (Undergraduate thesis): Universidad de Monterrey)
- 3. R. G. García, J. P. Ramirez, and Garcia, F. F. (2018). *Assessing Scientometric Bias in a Systematic Literature Review: A Kaizen Event in Hospitals Case* (Undergraduate thesis, Universidad de Monterrey)
- 4. C. U. Diaz, M. L. Garza, and P. D. V. Martinez (2018). *Reduction of Changeover in the Filter Line of a Brewery Plant* (Undergraduate thesis, Universidad de Monterrey)
- 5. Goitia, A. and Rodriguez, K. (2017). *Ambulance Turnaround Time: A Systematic Literature Review* (Undergraduate thesis, Universidad de Monterrey).
- 6. Aguilar, A.L., Espino Zubieta, A.R., and Lindacher, G. (2017). *Redesign of the Test Process in the Technical Support Area* (Undergraduate thesis, Universidad de Monterrey).
- 7. Santos, Y.A., Chavero, M.E., and Corral, A.J. (2016). *A Continuous Improvement Project to Increase the Fulfillment Level in a Wire and Cable Company* (Undergraduate thesis, Universidad de Monterrey).
- 8. Calvillo, W., Gonzalez, E., Tamez, D. (2015). *Increasing Productivity in a Steel Manufacturing Facility* (Undergraduate thesis, Universidad de Monterrey).

- 9. F. Fernandez and D. E. Garza (2010). *Reduction of Errors in the Administration of Drugs in a Local Hospital* (Undergraduate thesis, Universidad de Monterrey)
- 10. R. Cantu (2009). *Increasing Efficiency in Nursing Process* (Undergraduate thesis, Universidad de Monterrey).
- 11. T. Hernandez (2009). *Design of a Storage System for Finished Product* (Undergraduate thesis, Universidad de Monterrey)
- 12. F.J. Rodriguez, F. J. Rodriguez, and M. Villarreal (2009). *Reduction of Scrap in a Steel Line* (Undergraduate thesis, Universidad de Monterrey).
- 13. Leal, J. H. Rodríguez and A. Díaz (2008). *Increasing the Productivity Level in a High-Speed Cell in a Cigarette Company* (Undergraduate thesis, Universidad de Monterrey).
- 14. P.A. Ruiz, A.Alanis, and R. M. de Luna (2008). *Development and Implementation of a Raw Material Storage in a Telephone Company* (Undergraduate thesis, Universidad de Monterrey)
- 15. A. Herrera, F. Cardenas, and A. Vazquez (2005). *Reduction of Defects in a Motor Machining Plant* (Undergraduate thesis, Universidad de Monterrey)
- 16. G. Rodriguez, A.A. Morales, and P.Z. Moreno (2005). *Optimization of Raw Material Process in a Steel Transformation* Company (Undergraduate thesis, Universidad de Monterrey).
- 17. B. Rodriguez, D. Zapata, V. Garcia (2005). *Reduction of Rework in an Automotive Maintenance Company* (Undergraduate thesis, Universidad de Monterrey)
- 18. A. Serrano, E. Weigend, and J.C. Valdez (2004). *Production Line Optimization in a Coil Motor Manufacturing Company* (Undergraduate thesis, Universidad de Monterrey)
- 19. E. Reyes, R. Ibañez, and L. Navarro (2004). *Redesign of Raw Material Inventory Systems* (Undergraduate thesis, Universidad de Monterrey)
- 20. R. Belloc and R. Montolla (2004). *Design and Implementation of SPC in Akra* (Undergraduate thesis, Universidad de Monterrey).
- 21. Garcia, F. Cortés and B. Maquivar (2004). *Cost Reduction Increasing Efficient Use of Materials and Machines* (Undergraduate thesis, Universidad de Monterrey).
- 22. Ramos, M. A. Urdiales and R. F. Valadez (2003). *Increase the RTY in a Production Line of ELCO* (Undergraduate thesis, Universidad de Monterrey).
- 23. Maycotte, D. Martínez and J. M. García (2003). *Increasing Productivity in an Injection Line* (Undergraduate thesis, Universidad de Monterrey).
- 24. R. A. Esqueda and A. Sierra (2003). *Increasing Total Equipment Performance* (Undergraduate thesis, Universidad de Monterrey).

- 25. R. Cerda, L. F. Villarreal and A. Benavides (2003). *Implementing a Quality Methodology in a Production Line* (Undergraduate thesis, Universidad de Monterrey).
- 26. K. Martínez and R. Ibarrola (2003). *Increasing Productivity of Connector Rods Production* (Undergraduate thesis, Universidad de Monterrey).
- 27. G. Valle and R. Elizondo (2003). *Applying Six Sigma Methodology in an Automotive Services Maintenance* (Undergraduate thesis, Universidad de Monterrey).
- 28. J. E. Caballero and R. Garza (2002). *Increasing the RTY in a Ceramic Sink Manufacturing* (Undergraduate thesis, Universidad de Monterrey).
- 29. G. Treviño and A. Gonzalez (2002). *Design of a Scrap Reduction System* (Undergraduate thesis, Universidad de Monterrey).
- 30. A. Gutierrez and L. R. Gutierrez (2001). *Scrap Reduction in a Polyethylene Hose Production Line* (Undergraduate thesis, Universidad de Monterrey)
- 31. C. Elizondo and J. Garcia (2001). *Dimensional Analysis of the Coils Part* (Undergraduate thesis, Universidad de Monterrey).
- 32. González and J. P. Treviño (2001). *Measuring Process Capabilities in Three Plants* (Undergraduate thesis, Universidad de Monterrey).
- 33. L. Marquez and A. Martinez (2001). *Applying Six Sigma Methodology to Reduce the Second Quality product* (Undergraduate thesis, Universidad de Monterrey).
- 34. F. Arreola and G. Fernández (2001). *Design and Implementation of SPC Software* (Undergraduate thesis, Universidad de Monterrey).
- 35. J. Brocker and J. E. Gallaga (2000). *Develop and Implementation of SPC in a Steel Company* (Undergraduate thesis, Universidad de Monterrey).
- 36. J. Montemayor and O. Moreno (2000). *Applying Six Sigma Methodology for Reduction of Over Dimension in Potential Wires* (Undergraduate thesis, Universidad de Monterrey).
- 37. E. Valenzuela (2000). *Redesigning a Quality Systems ISO 9002* (Undergraduate thesis, Universidad de Monterrey).
- 38. H. M. Elizondo and C. Arredondo (1999). *Development and Implementation of SPC in an Automotive Manufacturing Organization* (Undergraduate thesis, Universidad de Monterrey).
- 39. J. A. De la Cerda, J.M. Alvarez (1998). Systems to Define, Record, Analyzes and Reduces the Scrap in an Automotive Manufacturing Organization (Undergraduate thesis, Universidad de Monterrey).
- 40. A. T. Hernandez (1998). *Application of Six Sigma Methodology in a Motor Assembling and Final Test* (Undergraduate thesis, Universidad de Monterrey)

## VISITING PROFESSOR

## **2021** Universidad Tecnologica del Peru (10 hours online)

Industrial Engineering Arequipa, Peru

## **2019 University of Minho** (one week)

System and Production Department Braga, Portugal

# **KEYNOTE SPEAKER**

**2021** Bringing the Academy and Industry: Developing Industrial Collaboration (1 hour), International Research Networking Workshop, University of Derby, July 14-15, 2021.

# **PUBLICATIONS**

#### **Books**

- 1. Gonzalez Aleu, F and Garza Reyes, J.A. (2020). Leading Continuous Improvement Projects: Lessons from Successful, Less Successful and Unsuccessful Continuous Improvement Case Studies, Productivity Press, Boca Raton, FL
- 2. Gonzalez Aleu, F (2003), Seis Sigma para Gerentes y Directores, Librosenred.

## **Book chapters**

 Gonzalez-Aleu, F., Robertson, C., Vazquez, J., Verduzco-Garza, T., Torrecillas-Salazar, J. A., & Valdez-de la Rosa, L. M. (2019). Industry 4.0: Success through Collaboration. Emerging Frontiers in Industrial and Systems Engineering: Success Through Collaboration, 21.

#### **Journal Articles**

- 1. González-Aleu, F., Granda-Gutierrez, E.M.A., Garza-Reyes, J.A., Garza-Villegas, J.B., and Vazquez-Hernandez, J. (2021), "Increasing service quality at a university: A continuous improvement projects," *Quality Assurance in Education*, DOI 10.1108/QAE-02-2021-0020
- 2. Salar-Reyna, R., Gonzalez-Aleu, F., Granda-Gutierrez, E.M.A., Diaz-Ramirez, J., Garza-Reyes, J.A., and Kumar, A. (2020), "A systematic literature review of data science, data analytics, and machine learning applied to healthcare engineering systems," *Management Decision*, DOI 10.1108/MD-01-2020-0035

- 3. Garza-Reyes, J.A., Christopoulos, C., Kumar, A., Luthra, S., González-Aleu, F., Kumar, V., & Villarreal, B. (2020), "Deploying Kaizen events in the manufacturing industry: An investigation into managerial factors," *Production Planning & Control*, DOI: 10.1080/09537287.2020.1824282
- 4. Gonzalez Aleu, F., Van Aken, E.M. Cross, J., and Glover, W., (2018), "Continuous improvement projects within Kaizen: Critical success factors in hospitals," *The TQM Journal*, Vol. 30 No. 4, pp. 335-355
- 5. Gonzalez Aleu, F. and Van Aken, E.M. (2017), "Continuous improvement projects: an authorship bibliometric analysis," *International Journal of Health Care Quality Assurance*, Vol. 30 No. 5, pp.467-476
- 6. Keathley-Herring, H., Van Aken, E.M., Gonzalez Aleu, F., Deschamps, F., Letens, G. and Cardenas Orlandini, P. (2016), "Assessing the maturity of a research area: bibliometric review and proposed framework," *Scientometrics*, Vol. 109 No. 2 pp.927-951
- 7. Gonzalez Aleu, F. and Van Aken, E.M. (2016), "Systematic literature review of critical success factors for continuous improvement projects," *International Journal of Lean Six Sigma*, Vol 7 No. 3, pp. 214-232

#### **Conference Proceedings Papers**

- 1. Aghayev, H., Garza-Reyes, J. A., Nadeem, S. P., Kumar, A., Kumar, V., Rocha-Lona, L., & González-Aleu, F. (2020, March). Lean readiness level of the Azerbaijan construction industry. In *Proceedings of the international conference on industrial engineering and operations management, Dubai, UAE, March* (pp. 10-12).
- 2. Aleu, G., Flores, F. F., Perez, J., Gonzalez, R., & Garza-Reyes, J. A. (2020). Assessing systematic literature review bias: Kaizen events in hospitals case study. In *Proceedings of the international conference on industrial engineering and operations management, Dubai, UAE, March*
- 3. Martinez, C. R., Aleu, F. G., Granda, E. M., & Nadeem, S. P. (2020). Quality improvement projects in catheterization laboratories: A systematic literature review. In *Proceedings of the international conference on industrial engineering and operations management, Dubai, UAE, March*
- 4. Gonzalez-Aleu, F., Van Aken, E.M., Cross, J., and Glover, W., (2019), "Conceptual framework to estimate continuous improvement project success in hospitals," In *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Bangkok, Thailand, March 5-7, 2019
- 5. Deesrisak, J. A. N., Garza-Reyes, J. A., Nadeem, S. P., Kumar, A., Kumar, V., González-Aleu, F., & Vil-larreal, B. (2019). Transport operations optimisation through lean implementation: A case study. In *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Bangkok, Thailand, March 5-7, 2019
- 6. Gonzalez-Aleu, F., (2018), Performance excellence self-assessment tool: A hospital case study, *Proceedings of the International Conference on Industrial Engineering and Operation Management*, Bandug, Indonesia, March, 6-8, 2018
- 7. Barrientos, M.E.S., Hinojosa, V.A., Garcia, F.M.A., Vazquez, J., and Gonzalez Aleu, F., (2018), Increasing value added in an automotive assembly line. A case study,

- Proceeding of the International Conference on Industrial Engineering and Operations Management, Bandung, Indonesia, March 6-8, 2018
- 8. Gonzalez Aleu, F., Van Aken, E.M., Cross, J. and Glover, W. (2017), Determinants of goal achievement for continuous improvement projects in hospitals, *Proceedings of the 2017 Industrial and Systems Engineering Conference*, Pittsburgh, PA, May 20-24, 2017
- 9. Gonzalez Aleu, F. and Van Aken, E.M. (2017), Bibliometric analysis of research design characteristics in continuous improvement projects in hospitals, *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Rabat, Morroco, April 11-13, 2017
- 10. Chavero-Hidalgo, M.E., Santos-Muñiz, Y.A., Corral-De Leon, A.J. (2017), A continuous improvement project to increase the fulfillment level in a wire and cable company, *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Rabat, Morroco, April 11-13, 2017
- 11. Keathley, H, Bean, A., Chen, T., Vila, K., Ye, K. (2016), Bibliometric analysis of research design characteristics in engineering management research, *Proceedings of the 2016 Industrial and Systems Engineering Research Conference, May 21-24*, Anaheim, CA
- 12. Keathley, H., Bean, A., Chen, T., Vila, K., Ye, K. and Gonzalez Aleu, F. (2015), Bibliometric analysis of author collaboration in engineering management research, *American Society for Engineering Management 2015 International Conference*, October 7-10, Indianapolis, IN
- 13. Gonzalez Aleu, F. and Keathley, H. (2015), Design and application of a meta-evaluation framework, *Proceedings of the 2015 Industrial and Systems Engineering Research Conference*, May 30 June 2 2015, Nashville, TN.
- 14. Gonzalez Aleu, F., & Keathley, H. (2013). Critical success factors for continuous improvement projects: Maturity of the field, *American Society for Engineering Management 2013 International Annual Conference*.
- 15. Gonzalez Aleu, F., & Van Aken, E. M. (2013). Continuous improvement projects in hospitals: A systematic literature review, *Proceedings of the 2013 Industrial and Systems Engineering Research Conference*.
- 16. Keathley, H., Dechamps, F., Leite, L. R., Gonzalez Aleu, F., Cardenas Orlandini, P. F., & Van Aken, E. M. (2013). Proposed maturity assessment framework for a research field, *Proceedings of the 2013 Industrial and systems Engineering Research Conference*.
- 17. Keathley, H., Gonzalez Aleu, F., Cardenas Orlandini, P., Van Aken, E., Deschamps, F., & Leite, L. R. (2013). Maturity assessment of performance measurement implementation success factor literature, *American Society for Engineering Management 2013 International Annual Conference*. Minneapolis.
- 18. Gonzalez Aleu, F., & Gausepohl, K. (2012). Are we making progress? A case study using Baldrige assessment tool, *Proceedings of the 2012 International Annual Conference of the American Society for Engineering Management* (pp. 625-631). American Society for Engineering Management
- 19. Gonzalez Aleu, F., and Sillero, J (2008). Incorporation of strategic framework into a design of an academic curriculum program: The IES UDEM case, ICERI (Spain).

# **Professional Papers**

- 1. Mejora Continua. Evolución sin Tropiezos, Magazine: Manufactura. Ed. Expansión (2003).
- 2. Seis Sigma la campana mas codiciada, Magazine: Manufactura. Ed. Expansión (2002).
- 3. ISO 9000: Poniendo todo por escrito, Revista: Manufactura. Ed. Expansión (2000).

## **Conference by Invitation**

- 1. Conference Speaker at Industrial and System Engineering Seminar (Mexico, 2004)
- 2. Conference Speaker at Industrial and System Engineering Seminar (Mexico, 2003)
- 3. Conference Speaker at XXXI Manufacturing Research at ITESM (Mexico, 2000)

# AWARDS AND RECOGNITIONS

## **AWARDS AND HONORS**

- 1. **Outstanding Track Chair** (2019), Industrial Engineering and Operations Management Conference Annual Conference 2019, IEOM, Bangkok, Thailand
- 2. First Place in Best Paper, Engineering Management Track (2017), IISE, Pittsburgh, PA
- 3. **First Place in Graduate Student Paper Competition** (2017), Industrial Engineering and Operations Management Industrial and Systems Engineering Research Conference, IEOM, Rabat, Morocco
- 4. **Second Place Best Dissertation Award** (2017), Industrial Engineering and Operations Management Annual Conference, IEOM, Rabat, Morocco
- 5. **Second Place in Student Paper Competition** (2015), Industrial and Systems Engineering Research Conference, Engineering Management Track, IISE, Nashville, TN
- 6. **Second Place in Advance Category** (2019), XXII Award to the Research Sciences and Technology, Universidad de Monterrey, San Pedro Garza García, NL, Mexico

#### STUDENT RECOGNITION

- 1. **Summa Cum Laudem** (2020), Hugo Alexis Treviño (Role: Thesis advisor), Universidad de Monterrey, San Pedro Garza García, N.L. México
- 2. **Outstanding Master's Thesis** (2019), Luisa Lucero Carrillo (Role: thesis advisor), Universidad de Monterrey, San Pedro Garza García, N.L. México
- 3. First Place in Best Student Paper Competition 2017 Industrial Engineering and Operations Management (2017), Mitzary Elizabeth Chavero Hidalgo, Yaheth Alejandra Santos Muñiz, Alan Javier Corral de León (Role: Thesis advisor), IEOM, Rabat, Morroco
- 4. **Third Place in Best Student Paper Competition.** Industrial Engineering and Operation Management (2017), Riccardo Maccaferri Gonzalez (Role: Thesis advisor), IEOM, Bogotá, Colombia
- 5. **Second Place in Student Paper Competition** (2015), American Society for Engineering Management International Annual Conference 2015, Kyra Vila, Andrew Bean, Tianxiang Chen and Kai Ye, ASEM, Indianapolis, IN

## **GRANTS AND FINANCIAL AIDS**

#### Grant

- 2019 Mobility Grant to University of Minho by Erasmus (\$2,000 euros)

#### Financial aids

- 2010-2015 Master and Ph.D. degree by CONACYT (\$120,000 U.S. dollars)

# PROFESSIONAL AFFILIATIONS

- Industrial Engineering and Operations Management (2017 Present)
- American Society for Quality (2016 Present)
- American Society for Engineering Management (2010 Present)
- Institute of Industrial and Systems Engineers (2008 Present)

## PROFESSIONAL EXPERIENCE

# **2007 – 2008** London Consulting Group.

Consulting Firm Mexico, Puerto Rico, Chile and Peru

## Project Manager

- Diagnostics: Ariztia (Chile), Sociedad Agricula Viru (Peru), and Ashford Hospital (Puerto Rico). Each diagnostic was sold as a 24-week project.
- Ariztia's Project: Develop and implement tools to improve the goals in Production Planning, Production Floor (Overall Equipment Effectiveness and Lean) and Maintenance Program. Annual Saving \$3.8 million USD.
- ING Assurance's follow up audit: Review sustainability of the improvements three months after project completion

#### **2005 – 2007** International Business Solutions

Consulting Firm Mexico

## Project Manager

- Diagnostics: Cartonpack, EYEMSA, and PBG Mexico. Each diagnostic was sold as a 26 week project
- Cartonpack's Project: Develop and implement tools to improve the goals in Commercial, Logistic, Management, Production Floor and

Maintenance. Annual Savings \$1.3 million USD. We sold 12 additional weeks to roll out in 3 more plants of Titan.

- EYEMSA's follow up Audit: Review the sustainability of the improvements three months after project completion.

## 1998 – 2005 IMSA-MEX

Steel transformation Mexico

## Quality and Environmental Systems Chief (2000-2005).

- Designed the strategic planning of the Quality Management for 2001-2005.
- Developed, implemented and lead the quality systems ISO TS 16949:2002 (First Mexican Steel Company in obtaining this certification) and the environmental system ISO 14001. First Mexican Steel Company in obtaining this certification in all their facilities.
- Developed the APM's Six Sigma methodology, saving US\$750,000 in three projects.
- Team Lead of the National Technology Award 2000; obtained second place.
- Trained more than 50 employees in ISO TS 16949, ISO 14001, 5S's, and 6 Sigma.

#### Quality Supplier Management Leader (1998-2000).

- Designed a complete quality system, which was applied to 22 local suppliers and received US\$350,000 in discounts for products and services of increased quality.
- Second part audit to our steel suppliers in Brazil and Venezuela

#### 1997 – 1998 General Electric Industrial Motors Mexico (1997-1998).

AC and DC Industrial Motors Mexico

#### ISO 9001 and Quality Process Engineering Leader.

- Reduced overtime by 10% for eight inspectors in the process of manufacturing Fabrication, Scheme and Coils while providing better service to the production line
- Planned and executed the project to implement ISO 9001. Achieved certification in a record time of six months (compared to average of eight months).
- Answered corrective actions requests from international customers.

#### 1994 – 1997 **Xignux Group.**

Wire Manufacturing Mexico

#### Quality Systems Chief (1996-1998).

 Applied statistical hypothesis testing that demonstrated product inspections were superior to customers such as Robert Bosch, GE, and Lucent Technologies.

## Statistical Engineering (1994-1996).

- Implemented of SPC in five areas, reducing customers' claims
- Increasing the capacity process to manufacture products to customers' specifications.

## SERVICE ACTIVITIES

#### **BOARDS AND COUNCILS**

2019 - Present International Journal of Industrial Engineering and Operations

**Management**Editorial Board

2018 – Present Society for Engineering Management Systems (Industrial and Systems

**Engineers**)

**Board of Directors** 

2017 – Present Christus Health (International Hospital Group)

**Quality and Patient Safety Council** 

#### TRACK CHAIR

#### **2018 – Present**

#### **Industrial and Systems Engineers Annual Conference**

- Society for Engineering and Management Systems Track Chair (Virtual, May 30-June 2, 2021)
- Society for Engineering and Management Systems Track Chair Leaders (New Orleans, Louisiana, May 30-June 2, 2020)
- Society for Engineering and Management Systems Co-Track Chair (Orlando, Florida, May 19-22, 2019)
- Society for Engineering and Management Systems Co-Track Chair (Orlando, Florida, May 18-21, 2018)

## 2017 - Present Industrial Engineering and Operations Management

- Operations Management Co-Track Chair (Dubai, United Arab Emirates, March 10-12, 2020)
- Operations Management Co-Track Chair (Bangkok, Thailand, March 5-7, 2019)

- Operations Management Co-Track Chair (Bandung, Indonesia, March 6-8, 2018)
- Operations Management Co-Track Chair (Rabat, Morroco, April, 11-13, 2017)

## **JOURNAL REVIEWER**

# 2015 - Prsent Journal for Healthcare Quality

Health Polity Public Health, Environmental and Occupational Health

#### **Journal of Environmental Management**

Environmental Engineering Management, Monitoring, Policy and Law Medicine (miscellaneous) Waste Management and Disposal

## **International Journal of Health Care Quality Assurance**

Business, Management and Accounting (miscellaneous) Health Policy

#### **International Journal of Lean Six Sigma**

Industrial and Manufacturing Engineering Management Science and Operations Research Strategy and Management

#### **TOM Journal**

Business and International Management Business, Management and Accounting (miscellaneous) Decision Sciences (miscellaneous) Strategy and Management

#### **Total Quality and Business Excellence**

Business, Management and Accounting (miscellaneous)

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