Dr. Delia J. Valles-Rosales
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Education

- Ph.D. 2001. New Mexico State University, Industrial Engineering.
- M.S. 1995. New Mexico State University, Industrial Engineering.
- B.S. 1988. Instituto Tecnológico de Durango, Industrial Engineering.

Academic Experience

- Industrial Engineering, New Mexico State University, Associate Professor, 2009 – present.
- Industrial Engineering, New Mexico State University, Assistant Professor, 2003 – 2008.
- Dean of the Graduate School, Instituto Tecnológico de Cd. Juárez, Chih. México, 2001 – 2003.
- Industrial Engineering, Instituto Tecnológico de Cd. Juárez, Chih. México, Associate Professor 2000 – 2003.
- Industrial Engineering, New Mexico State University, Teacher Assistant, 1996–2000 Mathematics, Dona Ana Community College, Lecturer, 1998 – 2000.
- Industrial Engineering, Instituto Tecnológico de Cd. Juárez, Chih. México, Assistant Professor, 1994 - 1997.

Honors and Awards from the last five years

- Synergy Faculty Leadership Award, College of Engineering, 2017
- Faculty Advisor for the Partners for the Advancement of Collaborative Engineering Education (PACE) Global Annual Forum and Design Competition.
- 2016 on the award of PACE Gold Certification NMSU's College of Engineering. This award was an effort between Associate Dean for outreach and public service Patricia A. Sullivan as PACE campus integrator, and faculty leaders are Associate Professors Delia J. Valles-Rosales from industrial engineering and Gabe Garcia from mechanical and aerospace engineering.
- 2015 on the award of PACE Silver Certification NMSU's College of Engineering. This award was an effort between Associate Dean for outreach and public service Patricia A. Sullivan as PACE campus integrator, and faculty leaders are Associate Professors Delia J. Valles-Rosales from industrial engineering and Gabe Garcia from mechanical and aerospace engineering.

Synergistic Activities from the last five years

- Director of Manufacturing and Systems Educational Programs in the College of Engineering, October 2018 – present.
- Dean's Fellow of Latin America Collaborations at New Mexico State University, May 2018 – 2019.
- Member of the Board of Advisors of NSF ERN National Conference. (2014 - Present).

- Member of the Board of Advisors of Women of Color Conclave Conference. (2014 - present).
- Member of the Board of Advisors for Electronics, Aerospace, and Manufacturing for Dona Ana Community College. (2011- Present).
- Committee Chair PACE Annual Forum CIC Competition. (March 1, 2014 - 2018).
- Editorial Board: International Journal of Industrial Engineering. (2007-present).
- Referee for Peer Reviewed Journals and conferences
  - Journals:International Journal of Industrial Engineering, Journal of Polymer Composites, Publons Wiley, and BioResources. (2007 – present).
  - Conferences: PACE, SACNAS, Emerging Researchers National (ERN), Association of American Colleges and Universities (AAC&U), ASEE, SHPE, and Composite Conference. (2007 – present).
- Proposal Reviewer, National Science Foundation Programs. (2010-present).
- Proposal Reviewer, Project Kaleidoscope (PKAL), Association of American Colleges & Universities. (2015 – present).
- Member of the International Design and Engineering Education Association, Monterrey Institute of Technology, (IDEEA). (August 2018 to present).
- Member of the Quality and Optimization Academic Group for the Autonomous University of Ciudad Juarez, Chihuahua, Mexico. (January 2013 to present).
- Member of the Colegio de Ingenieros Industriales de Durango. (2015 to present).

TEACHING (Last five years)

IE 217 MANUFACTURING PRCS	IE 490 SELECTED TOPICS: SUSTAINABLE SYSTEMS
IE 316 METHODS ENGINEERING	IE 490/590 SELECTED TOPICS: LEAN TOOLS IN SYSTEMS ENGINEERING
IE 351 APPLIED PROBLEM SOLVING IN INDUSTRIAL ENGINEERING	IE 490/590 INTRODUCTION TO ADVANCED MANUFACTURING
IE 375 MFG PROCESSES II	IE 575 ADV MFG PROCESSES
IE 478 FACILITIES PLAN/DSN	

RESEARCH (Last Five Years)

Postdoc Supervised

Dr. Damian Reyes

Project Title: "Prediction of biochemical and structural interactions on extrusion processes by molecular dynamics simulation Prediction of chemical interactions."
Period: from June 2016 to May 2018.
Co-Advisor Dr. Efren Delgado, Food Science and Technology Program, Department of Family and Consumer Sciences.
Co-Advisor Dr. Delia Valles-Rosales, Department of Industrial Engineering.
Funding Agency: CONACyT

PhD Students Supervised in the last five years

Doctoral Committee Chair, "Additive Manufacturing: Analysis of Particle Suspension." (January 2020 – present).

Advised: Ivan Nieto Gomez

Doctoral Committee Chair, “Internet of Things in Advanced Manufacturing.” (August 2019 – present).
Advised: Edward Kennedy.

Doctoral Committee Chair, **“**Utilization of Sugar Cane Bagasse as a New Source of Phenolic Compounds**.”** (January 2017 – present).
Co-Advised: Victor Velazquez Martinez. Co-Advisors: Dr. Efren Delgado, Food Science and Technology Program, Department of Family and Consumer Sciences and Dr. Delia Valles-Rosales, Department of Industrial Engineering.

Doctoral Committee Chair, "Replacement components’ prediction based on the reliability and operating environment using proportional hazards model. (August 15, 2014 - Present).
Advised: Alejandro Najera

Doctoral Committee Chair, "Characterization of Tensile Properties of Wood Plastic Composites: An Innovative Micromechanical Modeling and Numerical Simulation." (January 15, 2015 – December 2019).
Co-Advised: Juan Miguel Diaz Mendoza. Co-Advisors: Dr. Young Park from the Department of Mechanical and Aerospace Engineering and Dr. Delia J. Valles-Rosales from the Department of Industrial Engineering.

Doctoral Committee Chair, "Biopolymer degradation models: a research to design, test, and estimate lifetime of biopolymers under accelerated degradation conditions." (January 15, 2015 – December 2018).
Advised: Elias Arias Nava

Doctoral Committee Chair, "Identification of critical factors for success of engineering graduates using structural equation modeling by means of the partial least square technique.” (September 15, 2013 - December 15, 2016).
Advised: Imelda Olague

Doctoral Committee Chair, "Novel machine learning driven approach for clinical healthcare scheduling." (May 15, 2015 - December 15, 2015).
Advised: Joshua Sexauer

Doctoral Committee Chair, "Site-specific blade design optimization for a fixed-speed fixed-pitch wind turbine with variable airfoil profile using bem theory." (September 15, 2012 - May 15, 2015).
Advised: Arturo Del Valle

Doctoral Committee Chair, "Innovated Approach for synthesis and manufacturing of wood plastic composites using biomass resources." (January 15, 2010 - May 15,

2014).
Advised: Haytham Halodan

MS Student Thesis Supervised

Master's Thesis Committee Chair, (2017-2019). "Pelletization of Wood Waste Chars for Hydrogen Sulfide Adsorption." Co-Advised: Luis Carlos Moreno Martin. Co-Advisors: Dr. Cathie Brewer from the Department of Chemical and Materials Engineering and Dr. Delia J. Valles-Rosales from the Department of Industrial Engineering.

Master's Thesis Committee Chair, (2017-2018). "Optimization of jujube drying process." Advised: Jorge Flores Montano

Master's Thesis Committee Chair, (2016-2017). "Effect of high aged albedo cool roofs on commercial buildings energy savings in U.S.A. climates." Advised: Carlos Murguia.

Master's Thesis Committee Chair, (2016-2017). "Software analysis and simulation of injection molding to prevent warpage and shrinkage in wood plastic composites using pecan shell." Advised: Victor Hugo Cruz-Macias

Refereed Journal Articles in the last five years

1. Md. Ariful Ahsana, Vahid Jabbarib, Muhammad A. Imamc, Edison Castroa, HoejinKimd, Michael L. Currye, Delia J. Valles-Rosales, and JuanC.Noveron. (2020). "Nanoscale nickel metal organic framework decorated over grapheneoxide and carbon nanotubes for water remediation." *Journal of Science of the Total Environment,* Vol. 698 (2020). https://doi.org/10.1016/j.scitotenv.2019.134214.
2. Johnson, A.; Mu, L.; Park, Y.H.; Valles, D.J.; Wang, H.; Xu, P.; Kota, K.; Kuravi, S. A Thermal Model for Predicting the Performance of a Solar Still with Fresnel Lens. (2019). "A Thermal Model for Predicting the Performance of a Solar Still with Fresnel Lens." *Journal of Water*, Vol. 11(9), 1860; https://doi.org/10.3390/w11091860.
3. Efren Delgado, Luisa Valverde-Quiroz, Denisse Lopez, Peter Cooke, Delia Valles-Rosales, and Nancy Flores. (2019). Characterization of Soluble Glandless Cottonseed Meal Proteins Based on Electrophoresis, Functional Properties, and Microscopic Structure. Journal of Food Science, Vol. 84(10), 2820-2830; https://doi.org/10.1111/1750-3841.14770.
4. Luis Pérez-Domínguez; David David-Luviano; Delia Delia-Valles; Jesus Israel Hernandez Hernandez; and Manuel Ivan Rodriguez Borbon. (2019). Hesitant Fuzzy linguistic Term TOPSIS to Assess Lean Performance. *Journal of Applied Sciences*. Vol. 9(5), 873; https://doi.org/10.3390/app9050873.
5. Carlos Murgia, Delia Valles, Young Ho Park, Sarada Kuravi. (2019). "Effect of High Aged Albedo Cool Roofs on Commercial Buildings Energy Savings in U.S.A. Climates". *International Journal of Renewable Energy Research (IJRER*). Vol. 9(1), 65-72.
6. J.M Madrid Solorzano, D.J Valles Rosales, L.E Macias Martin, and L.Soto Nogueira. (2019). "Generación de un material a partir del bagazo de Sotol para el desarrollo de productos." *Journal of Mundo Fesc*, Vol. 9(17), 31-34.
7. Luis Carlos Méndez-González, Luis Alberto Rodríguez-Picón, Delia Julieta Valles-Rosales, Alejandro Alvarado Iniesta, and Abel Eduardo Quezada-Carreon. (2019).

Reliability Analysis using Exponentiated Weibull Distribution and Inverse Power Law. *Journal of Quality and Reliability Engineering,* Vol. 35(4), 1219-1230.
8. Arias, E. and Valles-Rosales, D. J. (2010). "Mechanical Properties of Poly Lactic Acid: An Accelerated Destructive Degradation." *American Journal of Engineering Research (AJER)*, Vol. 7(9), 167-172.
9. Perez, Luis & Alvarado-Iniesta, Alejandro & Valles-Rosales, Delia & García-Alcaraz, Jorge. (2018). Intuitionistic fuzzy dimensional analysis for multi-criteria decision making, *Iranian Journal of Fuzzy Systems, pp. 47-70.* DOI: 10.22111/ijfs.2018.3713.
10. Arias-Nava, E., Valles-Rosales, D., Diaz-Mendoza, J., Rodriguez-Picon, L., & Mendez-Gonzalez, L. (2018). "Effect Analysis of Fuse Deposition Modeling Processes On Mechanical Properties of Wood Plastic Composites". *International Journal of Engineering Sciences & Research Technology*, 7(5), 318-323.
11. Reyes, G., Angelis, S., Yan, Y., Sohn, H., Moghimi, A., and Valles-Rosales, D.J. (2018). Optimization of Bio-fuel Logistics in the Southwestern United States. *Journal of Multidisciplinary Engineering Science and Technology (JMEST),* Vol. 5 Issue 10, October, pp. 8894-8898.
12. Méndez-González, L. C., Rodríguez-Picón, L. A., Valles-Rosales, D. J., Romero-López, R., & Quezada-Carreón, A. E. (2017). Reliability analysis for electronic devices using beta-Weibull distribution. *Quality and Reliability Engineering International*, 33(8), 2521-2530.
13. Dr Luis Alberto Rodríguez-Picón, Dr Luis Carlos Méndez-González, and Dr. Delia J. Valles-Rosales. (2017). Reliability assessment of degradation processes with measurement error based on a gamma-Gaussian deconvolution. *Journal of Quality and Reliability Engineering International*. Manuscript ID is QRE-17-0490.
14. Charles Florez, Young Ho Park, Delia Valles-Rosales, Antonio Lara, and Emilio Rivera. (2017). Removal of Uranium from Contaminated Water by Clay Ceramics in Flow-Through Columns. *Journal of Water*, 2017, 9, 761; doi:10.3390/w9100761.
15. Luis Alberto Rodríguez-Picón, Anna Patricia Rodríguez-Picón, MS; Delia J Valles-Rosales, Ph.D.; Roberto Romero Lopez, Ph.D. (2017). Optimal reliability assessment of degradation processes with measurement error based on a gamma-Gaussian deconvolution model. *European Journal of Operational Research, Open Researcher and Contributor ID (ORCID).*
16. Juan de Dios Maese Núñez, Alejandro Alvarado Iniesta, Delia J. Valles Rosales, Yolanda A. Báez López. (2016). "Coeficiente alfa de Cronbach para medir la fiabilidad de un cuestionario difuso." CULCyT, Año 13, No 59, Especial No. 1, 146-156.
17. Rodríguez-Picón, L. A., Rodríguez Borbón, M. I., Valles-Rosales, D. J., & Flores Ochoa, V. H. (2016). Modelling degradation with multiple accelerated processes. Quality *Technology & Quantitative Management*, 13(3), 333-354. https://doi.org/10.1080/16843703.2016.1189202.
18. Valles-Rosales, D. J., Méndez-González, L. C., Rodríguez-Picon, L. A., Del Valle, A., and Alodan, H. A., (2016). Wood chile peppers stalks-plastic composite production. *Maderas-Cienc Tecnol, Vol. 18 No. 1,* (179-190).
19. Valles-Rosales, D. J., Rodríguez-Picon, L. A., Méndez-González, L. C., and Del Valle, A. (2016). Analysis of the mechanical properties of wood-plastic composites based on agriculture Chili pepper waste**.** *Maderas, Cienc. tecnol.* vol.18, n.1, pp.43-54.

20. Luis Carlos Méndez González, Manuel Iván Rodríguez Borbón, Delia J. Valles-Rosales, Arturo Del Valle, and Arnoldo Rodriguez. (2015). "Reliability Model for Electronic Devices under Time Varying Voltage." Journal of Quality and Reliability Engineering International, Vol. 32(4), 1295-1306. https://doi.org/10.1002/qre.1867.
21. Del Valle Carrasco, A., Valles-Rosales, D. J., Alvarado, A., Mendez, L. (2015). A site-specific design of a fixed-pitch fixed-speed wind turbine blade with multiple airfoils as design variable. *International Journal of Energy and Environment (IJEE), 6*(3), 287, 2015.
22. Del Valle Carrasco, A., Valles-Rosales, D. J. (2015). A Site-Specific design of a Fixed-Pitch Fixed-Speed Wind Turbine Blade for Energy Optimization using Surrogate Models. *Renewable Energy*, 112-119.

Referee Conference Proceedings in the last five years

1. Sarpong, K., Brewer, C. E., Valles-Rosales, D. J., O'Neill, M. K., Djaman, K. (2018). *Pyrolysis of Wood Excelsior Residues for Biochar and Renewable Energy Production* (pp. 10). ASABE Conference Proceedings. *ASABE International Annual Meeting*, Detroit, MI. (July 31, 2018).
2. Unguez, G. A., Duran, C., Valles-Rosales, D. J., Harris, M., Salazar, E., McDowell, M., Tang, W. (2015). 3D-printed wearable backpack stimulator for chronic in vivo aquatic stimulation. *Engineering in Medicine and Biology Society (EMBC), 2015 37th Annual International Conference of the IEEE* (pp. 2147-2150).
3. Alvarado, A., Perez, L., Valles-Rosales, D. J. (2015). *Análisis Dimensional Difuso Intuicionista para la Selección de Personal* (2nd ed., vol. 7, pp. 818-623). Juarez, Chihuahua: Academia Journals.
4. Sullivan, P. A., Valles-Rosales, D. J., and Sullivan, B. P. (2015). "International Application for Project Integrated Learning through Engagement in the Partnership for the Advancement of Collaborative Engineering Education (PACE)," American Society for Engineering Education (ASEE) International Forum, Seattle, WA.

Referee Research Conference Presentations from the last five years

1. Alejandro Najera-Acosta and Delia Julieta Valles-Rosales. (2018). "Management of Spare Components through Survival Modeling". *Emerging Researchers National (ERN)* Conference in STEM, Washington, D.C.
2. Arias Nava, E. H., & Valles-Rosales, D. J. (2018). Sustainable Biopolymers Manufacturing: Degradation Models. 2018 *Emerging Researchers National (ERN) Conference in STEM*. Washington, DC.
3. Galarza, J., Delgado Licon, E., Munson-Mcgee, S., Boeing, W. J., Valles-Rosales, D. J. (2018). "Glandless Cottonseed meal as a protein source for aquaculture," American Society of Agricultural and Biological Engineers, Las Cruces, NM.
4. Diaz-Mendoza, Juan M, Valles-Rosales, Delia, Arias-Nava, Elias, Jaques, John. (2018). "Modeling and Characterization of Mechanical Properties of Pecan Wood Plastic Composites." *IISE Annual Conference & Expo 2018*, Orlando, Fl.
5. Brewer, C. E., Sarpong, K. A., Salazar, A., O'Neill, M. K., Valles-Rosales, D. J., and Christiansen, F. (2017). "Biochar from Excelsior Residues for Plantation Production of Hybrid Poplar," *AICHE Annual Meeting, American Institute of Chemical Engineers*, Minneapolis, MN.

6. Diaz-Mendoza, Juan M, Valles-Rosales, Delia, Arias-Nava Elias, Jaques, John. (2017). “Statistical analysis of mechanical properties of wood plastic composites (WPC).” INFORMS- Annual Conference 2017 Houston Texas.
7. Najera, A., Valles-Rosales, D. J. (2017), "Axiomatic Based Approach to Integrate Product Design and Cellular Manufacture: A Case of Study in an Educational Facility," *SACNAS*, Salt Lake City, UT.
8. Tlapa, D., Limon, J., Baez, Y., and Valles-Rosales, D. J. (2015). "Critical Success Factors of Six Sigma: An Overview," IEEE International Conference on Industrial Engineering and Engineering Management, Selangor, Malaysia.
9. Valles-Rosales, D. J. Sullivan, B. Abdessattar, A. (2014). "Manufacturing a Portable Mobile Device: A Rapid Prototyping Approach," SHPE National Conference, Detroit, Michigan.

Referee Engineering Education Conference Presentations

1. Olague, I., Valles-Rosales, D. J. (2017). "Assessing the Impact of Experiential Learning through Industry-University Partnerships to Enhance Students' Self-efficacy beliefs," 12th International SUN Conference on Teaching and Learning, El Paso, TX.
2. Olague-Caballero, I., Valles-Rosales, D. J. (2016). "Assessing the Significance of Critical Factors for Success in Industrial Engineering Education Using Latent Variable Modeling Based on a Quality Management Approach," ASEE 123rd Annual Conference and Exposition, New Orleans, LA.
3. Olague, I. and Valles-Rosales, D. J. (2015). "How to integrate sustainability concerns into retention strategies of minority engineering students through experiential learning interventions," 7th Conference on Understanding Interventions the Broaden Participation in Science Careers, San Diego, CA.