Lorena Garcia Cucalon
Professional Engineer – TX 135506

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EDUCATION

Texas A&M University, College Station, Texas
Doctor of Philosophy in Civil Engineering, August 2016
Master of Science in Civil Engineering, May 2013

Catholic University of Guayaquil, Guayaquil, Ecuador
Bachelor of Science in Civil Engineering, May 2010

CERTIFICATE TRAINING PROGRAMS

Institute for the Study of Business Markets
Certificate of Mastery – ISBM B2B Marketing Mastery Track

TAMKO Building Products LLC
Lean Six Sigma Bronze Belt, January 2022

Texas A&M University
Academy for Future Faculty Certificate Program, May 2015

Catholic University of Guayaquil and The George Washington University
VIII Training Program on Governance and Political Management, December 2009

School of Civil Engineers of Guayas and University of Guayaquil
Training Program in Design and Quality Control of Asphalt Pavements, November 2007

SKILLS

Technical aptitudes: Vast experience in asphalt technologies and performance specifications for paving and roofing applications. Extensive hands-on experience in asphalt modification and laboratory characterization of asphalt materials for the paving and roofing sectors. Expert in rheology and performance testing of asphalt binders and mixtures.
Experienced in process optimization, project management, marketing, and business strategy.
Communication and personality: Excellent oral and written communication skills. Fluent in English and Spanish. Natural leader, outgoing, sociable, engaging, and passionate about learning and teaching.

INDUSTRY EXPERIENCE

KRATON Polymers LLC, Houston, TX, United States

Sales Manager – North America Paving and Roofing, December 2024 – Present

- Manage paving and roofing accounts
- Technical support to customers – formulation development, processing and performance requirements of polymer modified asphalts for use in paving and roofing applications.
- Support technical marketing efforts in North and South America

Marketing Manager – Paving and Roofing, May 2022 – November 2024

- Lead innovation efforts globally for paving and roofing
- Develop thorough understanding of paving and roofing market segments through working with regional sales teams, direct key customer interactions, market research up and down the value chain, trade shows and industry meetings and conferences.
- Support Marketing Communications in the execution of social media, PR, website content and trade show strategy to drive growth in assigned markets

TAMKO Building Products, Joplin, MO, United States

Asphalt Research Scientist, February 2017 – April 2022

- Formulation, performance specifications, and durability of polymer modified asphalts
- Development/optimization of test methods to assist innovation, processing, and manufacturing of all asphalt products
- Technical support for new product development and technical services
- Spanish language and technical assistance to the marketing team

Emulsificadora del Pacifico (EMULPAC S.A.), Duran, Ecuador

Plant Manager and Field Technical Support, June 2010 – July 2011

- Technical field support for recycling, chip seals, slurry seals and micro-surfacing

Quality Control Manager, September 2009 – May 2010

- Product development/optimization and QC/QA

Laboratory Technician (part time), July 2006 – August 2009

- Asphalt binder, emulsified asphalts, cutback asphalts, slurry seals, micro-surfacing

Concreto y Prefabricados, Guayaquil, Ecuador

Project Engineer – Asphalt Paving "Puente de la Unidad Nacional", April – July 2011

- Lead coordination of construction operations and supervision of QC/QA.

Laboratorio de Productos Bituminosos (LAPROBIT), Guayaquil, Ecuador

Laboratory Technician (by project), August 2006 – September 2009

ACADEMIC RESEARCH EXPERIENCE

Texas A&M Transportation Institute (TTI), College Station, Texas

Postdoctoral Research Fellow, August 2016 – February 2017

- Featured Project: National Cooperative Highway Research Program (NCHRP) Project 09-58 *"The Effects of Recycling Agents on Asphalt Mixtures with High RAS and RAP Binder Ratios"*

Graduate Research Assistant, September 2011 – May 2013

- Featured Project: NCHRP Project 09-49 *"Performance of Warm-Mix Asphalt (WMA) Technologies: Stage I – Moisture Susceptibility"*

Texas A&M Engineering Experimental Station (TEES), College Station, Texas

Graduate Research Assistant, June 2013 – August 2016

- Featured Project: National Priority Research Program (NPRP) *"Design and Evaluation of Short-Term and Long-Term Performance Warm Asphalt Mixtures (WMA) in the State of Qatar"*

Asphalt Laboratory at UCSG, Guayaquil, Ecuador

Laboratory Engineer (by project), June 2010 – July 2011

- Hot-mix asphalt design (Marshall methodology) and performance evaluation

Mexican Transportation Institute, Querétaro, Mexico

Laboratory Intern, September - October 2008

PROFESSIONAL AFFILIATIONS AND SERVICE

- Asphalt Institute Sustainability Committee – Member since 2025
- Asphalt Institute Roofing Rheology Task Force – Co-chair 2024
- NAPA Committee for Engineering Application and Practice – Member since 2023
- ASTM D08 and D04 Committees, Member since 2022
- Joplin Creative Learning Alliance Governance Committee, Member since 2022
- Transportation Research Record (TRR) Editorial Board, Handling Editor since 2021
- TRB Committee AKM20 (Asphalt Binders), Member since 2020
- American Society of Civil Engineers (ASCE), Member since 2020

- National Women in Roofing, Member since 2019
- Women of Asphalt, Member since 2019
- Association of Asphalt Pavement Technologists (AAPT), Member since 2012
- Reviewer for multiple academic journals including: ASCE, AAPT, TRR, RMPD, IJPE

HONORS AND AWARDS

- Highlighted as 1 of 100 Woman of Asphalt, 2019
- WTS Houston Chapter Helene M. Overly Memorial Scholarship, 2014
- International Road Federation Fellowship and Road Scholar Program, 2013
- Best Student Poster at AAPT meeting, 2012
- Academic Achievement. Bronze Award USCG, 2005

PUBLICATIONS

Romaní, Rolando Vila, Walter Antonio Mera Intriago, and **Lorena García Cucalón**. "Ecuadorian asphalt aging in laboratory and field.: Relationships and analysis." Revista ingeniería de construcción 39, no. 1 (2024): 51-62.

Amy Epps Martin, Fawaz Kaseer, Edith Arámbula-Mercado, Akash Bajaj, **Lorena Garcia Cucalon**, Fan Yin, Arif Chowdhury, Jon Epps, Charles Glover, Ellie Y. Hajj, Nathaniel Morian, Jo Sias Daniel, Mirkat Oshone, Reyhaneh Rahbar-Rastegar, Chibuike Ogbo, and Gayle King. "The Effects of Recycling Agents on Asphalt Mixtures with High RAS and RAP Binder Ratios", Final Report submitted to the National Cooperative Highway Research Program (2019).

Kaseer, Fawaz, Edith Arámbula-Mercado, **Lorena Garcia Cucalon**, and Amy Epps Martin. "Performance of asphalt mixtures with high recycled materials content and recycling agents." *International Journal of Pavement Engineerin*g (2018): 1-15.

Fawaz Kaseer, **Lorena Garcia Cucalon**, Edith Arámbula-Mercado, Amy Epps Martin, and Jon Epps. "Practical Tools for Optimizing Recycled Materials Content and Recycling Agent Dosage for Improved Short- and Long-Term Performance of Rejuvenated Binders Blends and Mixtures". *Journal of the Association of Asphalt Paving Technologists* (2018).

Lorena Garcia Cucalon, Fawaz Kaseer, Edith Arámbula-Mercado, Amy Epps Martin, Nathaniel Morian, Sara Pournoman, and Elie Hajj. "The Crossover Temperature: Significance and Application towards Engineering Balanced Recycled Binder Blends". *Road Materials and Pavement Design* (2018).

Ilaria Menapace, **Lorena Garcia Cucalon**, Fawaz Kaseer, Eyad Masad, and Amy Epps Martin, "Application of Low Field Nuclear Magnetic Resonance to evaluate asphalt binder viscosity in recycled mixes," *Construction and Building Materials* (2018)

Ilaria Menapace, **Lorena Garcia Cucalon**, Fawaz Kaseer, Edith Arámbula-Mercado, Amy Epps Martin, Eyad Masad, and Gayle King, "Effect of Recycling Agents in recycled asphalt binders observed with microstructural and rheological tests," *Construction and Building Materials* (2018).

Edith Arámbula-Mercado, Fawaz Kaseer, Amy Epps Martin, Fan Yin, and **Lorena Garcia Cucalon**. "Evaluation of Recycling Agent Dosage Selection Methods for Asphalt Mixtures with 19 High RAP and RAS Contents," *Construction and Building Materials* (2018)
Lorena Garcia Cucalon, Gayle King, Fawaz Kaseer, Edith Arámbula-Mercado, Amy Epps Martin, F.

Thomas Turner, and Charles Glover, "Compatibility of Recycled Binder Blends with Recycling Agents: Rheological and Physicochemical Evaluation of Rejuvenation and Aging Processes," *Industrial and Engineering Chemistry Research*, (2017)

Lorena Garcia Cucalon, Amit Bhasin, Emad Kassem, Dallas N. Little, Bruce E. Herbert and Eyad Masad. "Physicochemical Characterization of Binder-Aggregate Adhesion Varying with Temperature and Moisture," *ASCE Journal of Transportation Engineering: Part B Pavements* (2017).

Lorena Garcia Cucalon, Emad Kassem, Dallas N. Little, and Eyad Masad. "Fundamental Evaluation of Moisture Damage in Warm-Mix Asphalts". *Road Materials and Pavement Design* (2016).

Emad Kassem, **Lorena Garcia Cucalon,** Eyad Masad, and Dallas Little. "Effect of Warm Mix Additives on the Interfacial Bonding Characteristics of Asphalt Binders". *International Journal of Pavement Engineering* (2016)

Lorena Garcia Cucalon, Eisa Rahmani, Dallas N. Little, and David H. Allen. "A Multiscale Model for Predicting the Viscoelastic Properties of Asphalt Concrete". *Special issue of the Journal of Time Dependent Materials* (2016).

Lorena Garcia Cucalon, Fan Yin, Amy Epps Martin, Edith Arambula, Cindy Estakhri, Eun Sug Park, "Evaluation of Moisture Susceptibility Minimization Strategies for Warm-Mix Asphalt: Case Study". *Journal of Materials in Civil Engineering*, July 2015.

Amy Epps Martin, Edith Arambula, Fan Yin, **Lorena Garcia Cucalon**, Arif Chowdhury, Robert Lytton, Jon Epps, Cindy Estakhri, and Eun Sug Park. "NCHRP Report 763: Evaluation of the Moisture Susceptibility of WMA Technologies" (2014).

Lorena Garcia Cucalon, Amy Epps Martin, Edith Arambula, Fan Yin, Eun Sug Park, Jon Epps, "Moisture Susceptibility of WMA." *Proceedings ISAP: Asphalt Pavements*, July 2014, 691-700.

Fan Yin, **Lorena Garcia Cucalon**, Amy Epps Martin, Edith Arambula, Eun Sug Park, "Warm-Mix Asphalt Performance Evolution with Field and Laboratory Aging." *Journal of the Association of Asphalt Paving Technologies*, Vol. 83 (2014).

Fan Yin, Edith Arambula, Robert Lytton, Amy Epps Martin, and **Lorena Garcia Cucalon**, "A Novel Method to Evaluate Moisture Susceptibility and Rutting Resistance of Asphalt Mixtures using the Hamburg Wheel Tracking Test." *Transportation Research Record*, Issue 2446 (2014).

Fan Yin, **Lorena Garcia Cucalon**, Amy Epps Martin, Edith Arambula, Arif Chowdhury, Eun Sug Park, "Laboratory Conditioning Protocols for Warm-Mix Asphalt." *Journal of the Association of Asphalt Paving Technologies*, Vol. 82 (2013).

INDUSTRY PRESENTATIONS/POSTERS & GUEST LECTURES

Lorena Garcia Cucalon, Bob Kluttz, and Laurent Porot *"How can Polymer Modified Bitumen Contribute to Sustainable Construction?"* Kraton Webinar 2024

Lorena Garcia Cucalon *"SBS Modified Asphalt Binders"* Guest Lecture Auburn University, Auburn, AL 2024

Richard Blackwell and **Lorena Garcia Cucalon** *"Influence of Polymer Modification on the Rheology of Binders for IR Shingles"* Presentation at Petersen Asphalt Research Conference, Laramie, WY 2024

Richard Blackwell and **Lorena Garcia Cucalon** *"Understanding Viscoelastic Properties of Polymer Modified Asphalts for Paving"* Poster at Petersen Asphalt Research Conference, Laramie, WY 2024

Laurent Porot, **Lorena Garcia Cucalon**, David Bell, and Sjaak Damen *"Tailored Polymer modified Bitumen solution for maximising the reuse of surface asphalt"* Poster at the 8th E&E Congress, Budapest, Hungary 2024

Lorena Garcia Cucalon *"Highly Modified Asphalts, a Tool in the Resilient Pavement Toolbox"*. ASCE CI-CRC Joint Conference, Des Moines, IA 2024

Lorena Garcia Cucalon *"Sustainable Alternative Binders for Flexible Pavements"* Presentation at TRB Annual Meeting, Washington D.C 2024

Lorena Garcia Cucalon *"Modified Asphalt Binders"* Guest Lecture for CVEG 563V, University of Arkansas, Fayetteville, AR 2023

Lorena Garcia Cucalon *"Limitations of LVE Properties in Binder Characterization*" Presentation at TRB Annual Meeting, Washington D.C 2023