



# Racheal D. Lute

Ph.D.  
TECHNICAL STAFF III  
RATHS, RATHS & JOHNSON, INC.

## CONTACT

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## EDUCATION

### THE UNIVERSITY OF TEXAS AT AUSTIN

Doctor of Philosophy, Civil Engineering

Master of Science, Civil Engineering

Bachelor of Science, Civil Engineering

## EXPERTISE

- Laboratory Analysis
- Field Investigation
- Condition Assessment
- Facade Restoration
- Historic Preservation
- Concrete and Masonry Conservation

## PROFILE

Racheal Lute has over 15+ years of engineering experience specializing in the areas of rehabilitation and preservation of building enclosures with a focus on evaluating material performance.

Racheal's professional experience encompasses many aspects of architectural conservation and rehabilitation, from research to implementation. Her professional experience includes laboratory analysis of construction materials, field investigation, and condition assessment of numerous building types. She specializes in the assessment of concrete and masonry structures providing mitigation strategies for material deterioration.

## LICENSURES & CERTIFICATIONS

- Engineer-in-Training/Fundamentals of Engineering, TX

## PROFESSIONAL ORGANIZATIONS

- Association for Preservation Technology International (APTI)
  - 2018 – present
- Association for Preservation Technology Texas (APT TX)
  - 2018 – present
    - Austin Regional Co-Director, APT Texas Board of Directors, 2020 – 2022
    - Secretary, APT Texas Board of Directors, 2022 - 2024
    - Vice President, APT Texas Board of Directors, 2024 - present
- Preservation Austin, Grants Committee, 2023 - present

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## PUBLICATIONS



- “Investigating the use of lime residuals as an alternative in Portland limestone cement,” Lute, R., Drimalas, T., Folliard, K., *Advances in Civil Engineering Materials* 8, no. 1, 2019 pp. 623-636.
- “Synthesis on Alternate Reinforcements for Enhanced Corrosion Resistance in TxDOT Bridges,” Lute, R., Drimalas, T., Folliard, K., Austin, TX: Center for Transportation Research 2018.
- “Beneficial Use of Lime Residuals in Industrial and Infrastructure Applications: A Feasibility Study,” Lute, R., Drimalas, T., Folliard, K., Austin, TX: The University of Texas at Austin, 2017.
- “Durability of Calcium-Aluminate Based Binders for Rapid Repair (Dissertation),” Lute, R., The University of Texas at Austin, 2016.
- “Coatings and Sealers for Mitigation of Alkali Silica Reaction and/or Delayed Ettringite Formation,” Lute, R., Folliard, K., Drimalas, T., & Rust, C., proceedings of the International Conference on Alkali-Aggregate Reaction in Concrete, Sao Paulo, Brazil, 2016.
- “Evaluation of Coatings and Sealers for Mitigation of Alkali-Silica Reaction and/or Delayed Ettringite Formation (Thesis),” The University of Texas at Austin. Lute, R. (2008).
- “Evaluation of a Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete,” Adams, M., Lute, R., Moffatt, E., Ideker, J., *Journal of Testing and Evaluation* Vol. 46, No. 4, 2018.
- “An Alternative Method to Evaluate the Sulphate Resistance of Cementitious Binders,” Aguayo, F., O. J. Funez, T. Drimalas, K. J. Folliard and R. D. Lute, RILEM Final Workshop of TC 251-SRT External Sulphate Attack – Field Aspects and Lab Tests, Madrid-Spain, 2018.

## PRESENTATIONS



- “Lock 33: Celebrating Vestiges of the Hennepin Canal” (focus on the construction and social history of the canal), Association for Preservation Technology International (APTI) Annual Conference, Providence, RI, November, 14, 2025.
- “Lock 33: Celebrating Vestiges of the Hennepin Canal” (focus on the construction and social history of the canal), 9th Construction History Society of America (CHSA) Meeting, Charlottesville, VA, June 14, 2025.
- “Lock 33: Celebrating Vestiges of the Hennepin Canal” (focus on the industrial and mechanical aspects of the site and canal), Society for Industrial Archeology (SIA) Conference, Buffalo, NY, May 31, 2025.
- “Materials Matter: Understanding Masonry Materials and Repair Strategies,” Real Places Conference (Texas Historical Commission), Austin, TX, April 24, 2025.
- “Keeping up with the Cabins: The Effects of Differing Stewardship on Three French Colonial Vertical Log Homes in Ste. Genevieve, Missouri,” Association for Preservation Technology International (APTI) - National Trust for Canada Joint Conference, Montreal, Canada, November 2024.
- “Concrete Removal in Repairs Involving Corroded Reinforcing Steel (364.6T-02(11)) Use of Hydrodemolition for Removal in Unbonded Post Tensioned Systems (354.8T-02(11)),” American Concrete Institute (ACI) Fall Convention 2016, Session: Repair and Rehabilitation Tech Notes, Philadelphia, PA, October 25, 2014.
- “Durability of CAC and CSA Blended Systems for Rapid Repair Applications,” American Concrete Institute (ACI) Fall Convention 2014, Session: Research in Progress, Washington, DC, October 26-30, 2014.