

# Thermochromatic Functionalization of Asphalt Mixtures for Mitigating Urban Heat Islands Effects

This presentation will focus on Ms. Larissa Ribas ongoing doctoral research project titled "Thermochromic Functionalization of Asphalt Mixtures for Mitigating Urban Heat Island Formation" under the supervision of Dr. Verônica T. F. Castelo Branco (UFC/Brazil).

During the CAPES Sanduíche Doctoral Program (June 2024 to November 2024), Ms. Ribas conducted a significant phase of her research as a visiting scholar in the Civil and Environmental Engineering Department at UNL, collaborating with Dr. Jamilla Teixeira and her team. This project explores innovative solutions to enhance the thermal performance of asphalt pavements by integrating thermochromic materials, aiming to reduce heat absorption and contribute to more sustainable urban environments.

The presentation will outline the main developments achieved during her research stay at UNL, including material synthesis, laboratory characterization, and initial findings on the performance of thermochromic coatings in asphalt applications. It will also highlight the potential of this technology in addressing urban heat islands and discuss future research directions within this collaboration.

## About the speaker




**Larissa Ribas** is a PhD candidate in the Transportation and Environment Research Group (TRAMA) within the Graduate Program in Transportation Engineering (PETRAN) at the Federal University of Ceará (UFC, Brazil). She also holds an assistant professor position in the Department of Transportation Engineering and Geodesy at the Polytechnic School of the Federal University of Bahia (UFBA, Brazil). She has a bachelor's degree in Civil Engineering and a master's degree in Environmental Technology and Water Resources.

Ms. Riba's research and interests focus on the design of sustainable pavements by applying new nanomaterial solutions for pavement functionalization, analyzing the impact of cool pavement strategies on urban areas, and mitigating urban heat island effects.

 SEC C109

 December 6, 2024

 12:00pm – 1:00pm

 <https://unl.zoom.us/j/94444341565>