



To WHOM IT MAY CONCERN

As the Director of the Research Group *Grupo de Investigación en Ingeniería Sísmica, Eólica, Geotécnica y Estructural – G7* of the Faculty of Engineering at Universidad del Valle, I hereby certify that:

Engineer BRYAN CASTILLO TORRES, PhD, identified with Colombian ID No. 1.107.092.964 issued in Cali – Valle del Cauca, has been affiliated with the Research Group as a Research Assistant from 01/09/2019 to 31/12/2024, supporting full-time activities (40 hours per week) such as:

- Execution and data processing of Real-Time Hybrid Simulation (RTHS) tests on structural elements and energy-dissipation devices for typical Colombian buildings.
- Development of a dynamic platform for studying Human–Structure Interaction (HSI) on pedestrian bridges.
- Development of hybrid numerical models (direct and indirect dynamics) of Human–Structure Interaction in pedestrian bridges.

These activities were conducted within the framework of the research projects:

- *“Technological development of mixed structural control systems using seismic isolators and low-cost semi-active dampers for seismic risk mitigation in buildings,”* and
- *“Real-Time Hybrid Simulations: a reliable, fast, and economical alternative for the evaluation of resilient structures,”*

both belonging to the research program *“Emerging technologies for seismic risk mitigation of civil infrastructure.”*

Additionally, he completed within the Research Group his undergraduate, master’s, and doctoral theses titled:

- Undergraduate: “Development of three-dimensional models of Human–Structure Interaction in Pedestrian Bridges”.
- Master and Doctoral: “Innovative Multi-Experimental Performance Assessment of Civil Infrastructure under Dynamic Loads Using Real-Time Hybrid Simulation”.

This certification is issued in Santiago de Cali on the 15th day of December 2025.

Peter Thomson, PhD.

Full Professor

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Universidad del Valle