Nadine Fahed

PhD

Staff Consultant

Dr. Nadine Fahed is a Staff Consultant in the Civil Structural practice group at Engineering Systems Inc. (ESi) in the Atlanta, Georgia office. She has experience in sensor instrumentation, structural health monitoring of in-service structures, data acquisition and visualization, experimental testing design and execution, and system identification of in-situ structures. She has been involved in fieldwork on bridge structures, installing and working with different sensors, and data acquisition systems.

Prior to joining ESi, her research focused on developing a framework for input-parameter-state estimation of structural systems aimed at reducing the reliance on input parameters that are typically unknown a-priori. Her work integrated simplified structural dynamic models with linear and nonlinear stochastic filtering methods to enable the inference of critical system input and states under different response conditions.

Nadine Fahed holds a PhD in Civil Engineering and an MS in Electrical and Computer Engineering from Georgia Institute of Technology, as well as a BS in Civil Engineering from the University of Balamand.

Education

PhD, Civil Engineering. Georgia Tech. 2025

MS, Electrical and Computer Engineering. Georgia Tech. 2021

BS, Civil Engineering. University of Balamand. 2018

Languages

- English.
- Arabic.
- French.

Positions Held

Engineering Systems Inc., Atlanta, Georgia

- Staff Consultant, 2025 – Present

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Areas of Specialization

- Civil and Structural Engineering
- Commercial and Residential Structures
- Construction Defect Investigations
- Premise Liability
- Structural Analysis
- Insurance
- Failure Analysis

Georgia Institute of Technology, Atlanta, Georgia

- Research Assistant, 2018 – 2025
- Instructor for Engineering Mechanics Statics, 2021

Publications

“Martlet wireless sensing system for full scale bridge weigh-in-motion,” Proceedings Volume 12046, 1204605, P. Lander, **N. Fahed**, Y. Wang, 2022.

Presentations

“Joint Input-State Estimation for Inelastic Structural Systems Subjected to Extreme Dynamic Input,” Presented at the 7th International Conference on Applied Science and Technology (ICAST 2024).

“Finite Input Covariance with Input Updating Estimator. Engineering Mechanics Institute Conference (EMI 2021),” Virtual Conference (originally planned for Columbia University, New York, NY), May 25–28, 2021.

“Impact of Construction Loads on Steel Diaphragm Bridge Design,” Presented at GDOT/GTI 7th Annual Research Expo, GDOT Headquarters, Atlanta, GA, 2019. [Poster Presentation]