# Mehdi Modares

## I'm a Civil Engineering and Computational Mechanics Researcher

I am a tenured associate professor and director of the structural engineering program in the Department of Civil, Architectural, and Environmental Engineering at Illinois Institute of Technology, Chicago, IL. My courses taught span both undergraduate and graduate levels in structural engineering and computational mechanics including structural analysis, dynamics of structures and earthquake engineering. I have advised and mentored many undergraduate and graduate students including 5 PhD's. I am the author of more than 60 journal and conference publications, book chapters and technical reports. I am also an associate editor of a journal published under the American Society of Civil Engineers.

## What is Civil Engineering and Computational Mechanics?

Civil Engineering is the art of enhancing the physical world for the use and benefit of mankind while preserving it for the generations to come. Mechanics is a branch of applied physics that studies the physical phenomena including objects and forces. Computational mechanics is the application of computational methods in solving mechanics problems.

## Current Project

My research is in condition assessment and reliability of aging infrastructures in order to increase their service lives, maintainability, sustainability, and cost effectiveness. My research is also involved in advanced computational techniques needed to handle the analysis of such infrastructures.

I was director of a STEM (Science, Technology, Engineering, and Mathematics) project for 4th graders from underrepresented groups. The project was an eight-week Saturday program called "Little Structural Engineers" and emphasized theoretical as well as hands-on team-based instructions for bridge engineering with a curriculum developed and geared for elementary school students.

## What do you think?

Can buildings be designed such that they completely withstand the force of earthquake without experiencing any damage?