



The North Jersey Chapter of the Structural Engineering Institute (SEI) presents:

Aging Infrastructure, Risks, and Making Tough Decisions

**ASCE Live Webinar Presented by
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Co-Sponsored by ASCE Continuing Education and ASCE's Structural Engineering Institute

Date: April 29, 2015
Time: 6:00 to 7:00 pm – Registration starts at 5:30 pm.
Location: Jacobs, 100 Walnut Ave, Suite 604, Clark, NJ 07066
Cost: \$25 for ASCE members/ \$30 for guests/ \$20 Government Employees
Make checks payable to ASCE North Jersey Branch. **Pizza is included.**
RSVP: Seating is limited to 30 people in total. Please RSVP by April 24 by registering online at the Eventbrite website noted below:

[http://njb-aginginfrastructure.eventbrite.com\[njb-aginginfrastructure.eventbrite.com\]](http://njb-aginginfrastructure.eventbrite.com[njb-aginginfrastructure.eventbrite.com])

This program is approved for 1.0 PDH.

Webinar Description:

Since the construction of modern structures, civil engineers have been assisting infrastructure owners with planning, designing, constructing and inspection of their assets using the methodologies that have been developed empirically. Most of these heuristic approaches are based on simplified assumptions. As the infrastructure, especially the bridge inventory, continues to age and becomes a more complicated system its behavior changes. In these cases the traditional methodologies provide a significant challenge to bridge engineers, especially during inspection, load rating and overall safety assessment of “geriatric” bridges. Even though, in some cases the current conventional approaches have met the needs of the owners, there are an increasing number of situations where they have been proved insufficient. In recent years, engineers and bridge owners have started to hire smart technologies and sensing techniques in planning, evaluation, and monitoring of their assets which are mostly geriatric signature bridges that cannot be replaced or their replacement requires a few years during which the bridge has to remain in safe service. The following learning outcomes have been established for webinar participants:

- Know the challenges engineers face when dealing with aging bridges
- Understand the technologies available for bridge engineers
- Know the applications of technology in bridge engineering
- Learn the benefits and shortcomings of finite element modeling of bridges
- Become familiar with different types of sensors and simulation technologies
- Know the different applications for health monitoring of bridges,