



*The Association for Preservation  
Technology and the New York  
Landmarks Conservancy*

PRESENT

**A One Day Symposium**

# *State of the Art Techniques for Monitoring and Protecting Historic Structures*

**March 27, 2004**

**Columbia University**

**8:30 am – 5:00 pm**



This symposium will focus on technologies developed in other fields that could have significant uses in historic preservation and architectural conservation. Interested participants will include architects, engineers, architectural conservators as well as owners and managers of historic buildings.

The morning sessions will focus on emerging technologies for instrumentation and monitoring of structural movement in historic buildings. Professionals from several disciplines will discuss the application of fiber optics and global positioning systems as well as the integration of existing technologies for evaluating structural building movement.

Afternoon sessions will introduce and explore the application of cathodic protection systems to the preservation of historic steel frame buildings. Although well-proven in the shipbuilding, highway infrastructure, and petrochemical industries, cathodic protection has tremendous potential for protecting against corrosion of steel frame buildings.

## **CO-SPONSORS**

- Structural Engineers Association of New York
- Northeast Chapter of the Association for Preservation Technology
- Columbia University's Graduate School of Architecture, Planning, and Preservation



**Saturday March 27, 2004**  
**Columbia University**  
**Avery Hall, Wood Auditorium**  
**1172 Amsterdam Avenue**  
**New York City**  
**8:30 am – 5:00 pm**

Attendees will see and hear presentations on instrumentation for purposes of monitoring deterioration and structural integrity of historic buildings and monuments. Topics will also include cathodic protection of steel frame buildings.

Continuous monitoring of historic structures through the use of instrumentation has become increasingly common and is a useful method of assessing building damage, the efficacy of repairs, establishing cause and effect on surrounding buildings during construction, and for the validation of computer models.

Cathodic protection is a cutting-edge corrosion prevention technique proven after years of use in the shipbuilding, highway infrastructure and petrochemical industries. The large stock of early iron and steel framed buildings in both the United States and the United Kingdom has driven research into such a corrosion protection system. Only a very few limited projects in the United States have used cathodic protection against corrosion of steel frame buildings. Two of our speakers are from the United Kingdom, where this technology was pioneered, and they will share their experiences with us.

*Participants are eligible for a total of 6 AIA Learning Units.*



## Morning Session

### **Fiber-Optic Monitoring of Building Movement: Federal Hall National Memorial**

**Dr. Jürgen Braunstein**, Osmos, Germany  
**Marie Ennis**, P.E., Einhorn Yaffee Prescott, NYC

### **GPS: A New Tool for Structural Displacement Measurements**

**Dr. Tracy Kijewski-Correa** and  
**Dr. Ahsan Kareem**, University of Notre Dame

### **Monitoring the Long-Term Performance of a Heritage Building: The Peace Tower in Ottawa**

**M. Nady Said**, Institute for Research in Conservation,  
**Don Duchesne**, Heritage Conservation Services, Canada

### **The Use of Velocity Sensors, Crack- and Tilt-Meters to Measure the Effects of On-Going Construction Activity**

**Douglas Rudenko**, **Scott Kavalek**, and  
**Mohamad Sharifinassab**, Vibra-Tech, Mt. Laurel, N.J.

## Afternoon Session

### **Cathodic Protection: A Tool for the Repair of Early and Historic Steel-Framed Buildings**

**Peter A. J. Gibbs**, P.E., Taylor Woodrow, UK

### **Practical Aspects of Cathodic Protection to Conserve Iron and Steel in Heritage Buildings**

**David Farrell** and **Kevin Davies**, Rowan Technologies, UK

### **The Decision Making Process in the Application of Cathodic Protection**

**James Rhodes**, FAIA, Beyer Blinder Belle, NYC

## Symposium Registration

Register on-line at [www.apti.org](http://www.apti.org) or fax form to: 888-723-4242

☐ Professional Rate: \$90    ☐ Student Rate: \$45

LUNCH INCLUDED for BOTH RATES

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