



Professor Charles H. Dowding Symposium and Retirement Celebration



Saturday, April 28, 2018
Northwestern University
Evanston, IL

Northwestern University
 Robert R. McCormick
 School of Engineering and Applied Science
 Department of Civil and Environmental Engineering
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DOWDING SYMPOSIUM REGISTRATION and BANQUET RESERVATION FORM
Additional names in your party:

Name: _____
 Affiliation: _____
 Address: _____
 Voice/Mobile: _____
 Email: _____

Please send completed form and check, payable to
 Northwestern University, to
 Dowding Symposium
 Department of Civil and Environmental Engineering
 2145 Sheridan Road, A236
 Northwestern University
 Evanston, IL 60208-3109

Event	unit cost	number	total
Symposium, reception/dinner	\$100		
Symposium only	\$50		
Reception/dinner	\$50		
Osterberg lecture donation			
GRAND TOTAL			

online registration/reservation: <https://www.eventbrite.com/e/charles-dowding-symposium-and-retirement-celebration-tickets-43315949170>, **deadline: 6 April 2018 online or by mail**

Technical Program

Technological Institute, Room L361

2145 Sheridan Road, Evanston, IL

5 PDH will be awarded for this symposium

10:00 – 12:00 am

Welcome

Ground Vibrations

Kenneth Stokoe, University of Texas at Austin

Characterizing Geotechnical Materials with Seismic waves: Static and Dynamic Applications

Catherine Aimone-Martin, Aimone-Martin Associates, LLC,

Having a Blast with Chuck

Robert Langan, MEQ Geo Inc,

Induced Seismicity in the Oil Patch and Chuck Dowding's Contribution to its Mitigation

Alek Zubelewicz, University of New Mexico

Precursors of Dynamic Fracture in Rocks

Sebastian Bryson, University of Kentucky

Underwater Explosion Energy Dissipation near Waterborne Infrastructure

David Kosnik, CTL Group

Autonomous Monitoring of Dynamic Response of In-Service Structures for Decision Support

Lunch 12:00 – 1:00 pm

1:00 – 2:30 pm

Infrastructure

Thomas O'Rourke, Cornell University

Lessons Learned from Resilient Infrastructure

Andrew Graettinger, University of Alabama

Learning from Extreme Events

Brett Gitskin, ECS Midwest, LLC

Northwestern University: Ten years of Growth from the Bottom Up

Kevin O'Connor, GeoTDR, Inc,

Remote monitoring of the Threat of Sinkhole Formation under a Portion of US 18 in Cerro Gordo County, Iowa

David Hendron, SCS Engineers

Pore Pressure – The Forgotten Geotechnical Parameter

Refreshment break 2:30-3:00 PM

3:00-4:45 pm

Underground construction and rock mechanics

Arnon Rozen

Tunneling in the City of Jerusalem – History and Present

Yoram Sofrin, Israteam, Ltd

Optimal use of Underground Construction in Jerusalem Railway Station

William Hansmire, WSP

Legacy of University Research on the Washington DC Metro

Gary Brierley, Doctor Mole Incorporated,

Intelligent Tunnel Design

Joseph Labuz, University of Minnesota,

Enhanced Pyramidal Failure Surfaces for Rock

Roman Hryciw, University of Michigan,

Stereophotography without Glasses and Other Lessons Learned from Professor Charles Dowding

Reception and Dinner

Allen Center, Northwestern University

2169 Campus Drive, Evanston

Reception: 5:30 pm – 6:30 pm

Dinner: 6:30 pm – 9 pm

Costs

Symposium \$50 – includes USB drive of technical presentations, break, and lunch

Reception & Dinner \$50 – includes open bar, hors d'oeuvre and dinner

Accommodation Information

Visit <http://www.mccormick.northwestern.edu/civil-environmental/events/department-seminars/dowding-retirement.html>

Charles H. (Chuck) Dowding has been a Professor in the Department of Civil & Environmental Engineering at Northwestern University since 1976, with a BS from the University of Colorado in 1967, a PhD from the University of Illinois, a post doc at the Norwegian Geotechnical Institute, and an assistant professorship at MIT.

Professor Dowding is recognized for his contributions to geotechnical engineering that revolutionized remote monitoring of soil and rock worldwide and for

contributions to engineering education. He is best known for his four books: *Construction Vibrations*, *Blast Vibration Monitoring and Control*, *Micro-Meter Crack Response to Vibration and Weather* and *GeoMeasurements by Pulsing TDR Cables and Probes*.

He was a member of the board of directors of the International Society of Explosive Engineers; chair of the ASCE Rock Mechanics Committee; board of directors of the American Rock Mechanics Association; a member of the US Bureau of Mines team that developed the basis for federal guidelines for allowable blasting vibrations. Professor Dowding co-founded Digital Vibration, Inc., the first company to perfect remote, digital, blast vibration and crack monitoring by computer, a technology which remains in use worldwide. He was also the principal investigator in the development of the commercially available miniaturized Time Domain Reflectometry (TDR), to expand its capabilities for the geotechnical profession.

Professor Dowding's consulting engagements have involved projects in Alaska, Panama, Hong Kong, Italy and some 30 of the United States. He has consulted for many governmental agencies including the National Park Service, U.S. Department of Transportation, U.S. Department of Energy, and companies, including IBM, MWH, Stone & Webster, Sargent & Lundy, CH2MHill, Shell and Fina oil.

During his 40-year tenure at Northwestern he mentored 62 M.S. and 18 Ph.D. students who have gone on to have distinguished consulting careers, and lead other civil, mining, and environmental engineering departments. He is also active in public service and is currently the Chair of the Environmental and Forestry Commission in Winnetka, IL.

In 2017, Professor Dowding was bestowed with ASCE's highest honor – Distinguished Member. In addition, he was also recognized with the ASCE's Illinois Section Civil Engineer of the Year Award in 2014, the International Society of Explosives Engineers President's Distinguished Service Award in 2011, the Applied Research Award from the National Rock Mechanics Committee, Fellow of the American Rock Mechanics Association, in 2008, the University of Illinois at Champaign-Urbana's Distinguished Civil Engineering Alumni Award in 2006, Distinguished Engineering Education Alumnus, University of Colorado in 2003 and more.