2018 STRUCTURAL ENGINEERING Seminar Series

Earle Brown Heritage Center
6155 Earle Brown Drive
Brooklyn Center, MN

Tuesday, January 30, 2018
Achieving Durability in Post-Tensioned Structures: A Look at Lessons We Have Learned (Or Need To)

Tuesday, February 6, 2018
Where Have All the Good Sites Gone? Tackling Construction Challenges in Tight Urban Sites and in Poor Soil Conditions

Tuesday, February 13, 2018
Ten Years After the 35W Collapse—What Has Changed?

Tuesday, February 20, 2018
ASD vs SD—A Masonry Cage Fight

Tuesday, February 27, 2018
Aluminum and Stainless Steel Structural Design Standards

Tuesday, March 6, 2018
Engineering Ethics

Sponsored by:
University of Minnesota
-College of Continuing and Professional Studies
-Department of Civil, Environmental, and Geo- Engineering, College of Science and Engineering

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This Structural Engineering Seminar Series is designed for practicing engineers and architects. Each program addresses specific structural issues, principles, and concerns in the design and construction of buildings, bridges, and other structures.

The purpose of the Seminar Series is to:

- Provide current information on topics of interest to the structural engineering community
- Increase professionalism in structural engineering
- Provide a forum for continuing education in the engineering community

New This Year!

Our March 6, 2018, seminar fulfills the ethics requirement for CE credit. Join us in the Carriage Ballroom, with ample and spacious seating!

Seminar Schedule

Tuesday, January 30, 2018

Achieving Durability in Post-Tensioned Structures: A Look at Lessons We Have Learned (or Need To)

Post-tensioning systems in both building and bridge applications have undergone significant change since the beginning of their widespread use in the United States. This seminar will look at the complexity of these systems and their evolution to increase resiliency and durability, including case studies that show the importance of proper installation and design (and what to do when this goes wrong). The current state of the art and potential changes on the horizon will be discussed.

Presenter: *Andrea Schokker,* PE, PhD, LEED AP, Professor of Civil Engineering and Interim Dean of the Swenson College of Science and Engineering, University of Minnesota, Duluth, MN

Andrea Schokker is a professor of civil engineering at the University of Minnesota Duluth and is currently serving as the interim dean of the Swenson College of Science and Engineering. She is an active contributor and committee member in the American Concrete Institute, the Post-Tensioning Institute, and the American Segmental Bridge Institute. Her research focuses on post-tensioned concrete structures, and she has been a leader in writing specifications for durable post-tensioned systems, particularly for high-performance grouts.

Moderator: *Daniel Murphy,* PE

Tuesday, February 6, 2018

Where Have All the Good Sites Gone? Tackling Construction Challenges in Tight Urban Sites and in Poor Soil Conditions

Migration back to urban centers has resulted in redevelopment of existing underutilized sites. As urban construction continues, the remaining construction sites seem to provide unique challenges. This seminar will review different earth retention, underpinning, and soil improvement methods commonly used by specialty contractors. We will also discuss methods of managing delegated designs and review construction considerations that can be incorporated into project specifications.

Presenter: *Charles Allgood,* PE, LEED AP, Ground Improvement Engineering, Minneapolis, MN

Charles Allgood earned a bachelor of science in civil engineering from Virginia Military Institute and a master of science in civil engineering from University of Florida. He has 28 years of

consulting experience with private geotechnical engineering companies. He has devoted the last 17 years to designing Geopier® ground improvement systems to support buildings, retaining walls, embankments, and other structures over soft soil conditions.

Presenter: *Chad Underwood,* PE, PG, DGE, Engineering Partners International, LLC, Richfield, MN

Chad Underwood is a principal at Engineering Partners International, LLC. Engineering Partners is a specialty consulting engineering firm practicing in the areas of earth retention, foundation underpinning, and specialty deep-foundation design. Chad has a master of science in geotechnical engineering from the University of Wisconsin–Madison. He is a registered PE in seven states and has 20 years of geotechnical design and project management experience with regional and national engineering firms. He is also a board-certified geotechnical engineer by the Academy of Geo-Professionals.

Presenter: *Greg Greenlee,* PE, Engineering Partners International, Richfield, MN

Greg Greenlee is a principal at Engineering Partners International, LLC. Greg has a bachelor of science in civil (structural) engineering from Iowa State University and is a licensed engineer in 10 states. He has 23 years of experience working for manufacturing, regional and national design firms performing building structural design, specialty foundation design, temporary shoring and earth retention design, and building code and standard development.

Moderator: *Katherine Russell,* PE

Tuesday, February 13, 2018

Ten Years After the 35W Collapse—What Has Changed?

The 35W bridge collapse on August 1, 2007, created many questions and concerns about the bridge industry. Minnesota successfully opened a new bridge within 14 months and incorporated many changes in the design, construction, inspection, and maintenance of Minnesota's bridges. This session will discuss challenges immediately following the collapse, what knowledge we have gained from construction and monitoring of the new bridges, and finally, the process improvements, both statewide and nationally, that have advanced for bridge owners.

Presenter: *Catherine French,* PhD, PE, FACI, FPCI, Department of Civil, Environmental, and Geo- Engineering, University of Minnesota, Minneapolis, MN

Catherine French has been a member of the University of Minnesota faculty for more than 30 years. Her research addresses the behavior of reinforced and prestressed concrete structural systems, field monitoring of bridges, and numerical and experimental investigations of structural systems. She is a recipient of a number of awards, including the 2016 WTS MN Woman of the Year, ACI Joe W. Kelly Award, ACI Henry L. Kennedy Award, ACI RCRC Arthur J. Boase Award, and American Society of Civil Engineers (ASCE) Raymond C. Reese Research Prize. She currently serves on ACI Technical Activities Committee and ACI 318, Structural Concrete Building Code.

Presenter: *Ed Lutgen,* PE, Minnesota Department of Transportation

Ed Lutgen is the Minnesota Department of Transportation State Bridge Construction and Maintenance Engineer. Ed graduated from the University of Minnesota with a bachelor of civil engineering degree and has more than 20 years of experience in bridge design, maintenance, inspection, load rating, project development, and construction.

Presenter: *Kevin Western,* PE, Minnesota Department of Transportation

Kevin Western has over 30 years of experience working for the Minnesota Department of Transportation (MnDOT) and he currently serves as the State Bridge Engineer. He holds a master of science in structures from the University of Minnesota and a bachelor of science in civil engineering from the University of Wisconsin. During his tenure at MnDOT, he has held many roles in bridge design, standards, and construction, including State Bridge Design Engineer, Design Manager for the St. Croix Crossing, and Deputy Project Manager for Design on the 35W Bridge Project and the TH 53 Relocation Project.

Moderator: *Arielle Ehrlich,* PE

Tuesday, February 20, 2018

ASD vs SD—A Masonry Cage Fight

The TMS 402, Building Code Requirements for Masonry Structures, has two design methods: allowable stress design (ASD) and strength design (SD). This presentation will compare the differences, advantages, and disadvantages of each design method, with the comparison being made through examples. Examples will include beams, pilasters, bearing walls, and shear walls. Both ease of design and amount of required reinforcement will be considered.

Presenter: *Richard Bennett,* PhD, PE, The University of Tennessee, Knoxville, TN

Richard Bennett is a professor of Civil and Environmental Engineering at the University of Tennessee. Dr. Bennett has been very active on the TMS 402/602 Code Committee. He has chaired the Flexural, Axial Loads, and Shear Subcommittee and served as the vice-chair of the 2013 MSJC committee. Dr. Bennett was the chair of the main committee that developed the 2016 code and is currently 2nd vice-chair of the TMS 402/602 Code Committee.

Moderator: *Jennifer Popehn,* PhD, PE

Tuesday, February 27, 2018

Aluminum and Stainless Steel Structural Design Standards

This seminar will concentrate on the latest design standard of the Aluminum Association (2015), including background, design philosophy, rules, and design examples. The ASCE and AISC documents for the design of Stainless Steel structures will be briefly introduced and compared to the aluminum design methods. Some of the major changes in the 2016 AISC Steel Design Specification will also be discussed.

Presenter: *Theodore Galambos,* PhD, PE, Retired Professor, University of Minnesota, Minneapolis, MN

Theodore "Ted" Galambos is an Emeritus Professor of Structural Engineering at the University of Minnesota. He joined the department in 1981 and retired in 1997, but he continues to publish scholarly articles, give presentations around the world, and participate on code writing committees. His research areas are the reliability of structures, structural design standards, and stability of steel structures. Galambos has authored over 100 publications on various aspects of structural engineering and has participated in almost every major specification committee for metal structures in the United States.

The significance of Galambos's work in the field of engineering is celebrated by his election to the National Academy of Engineering. His single-largest contribution to the field is his key role in developing the reliability-based load factor and resistance design code for steel structures that is used today. In fact, in 1999 a writer for the American Institute of Steel Construction dubbed Galambos "The Father of LRFD." Some of his other accolades include the 2002 American Society of Civil Engineering (ASCE) OPAL Award, honorary membership in ASCE, and honorary doctorates from the Technical University of Budapest, the University of North Dakota, and the University of Minnesota.

Moderator: *Lauren Linderman,* PhD

Tuesday, March 6, 2018

Engineering Ethics

Engineering is an important learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and engineers must be dedicated to the protection of the public health, safety, and welfare. They are faced with different situations on a daily basis while practicing engineering. This presentation will provide moral and ethical guidance to engineers in their decision-making process. Most importantly, it will provide engineers with insight on how to respect and protect their profession with utmost professionalism.

This seminar will be in the Carriage Hall Room, which allows for ample and spacious seating.

Presenter: *Jeff Coleman,* Attorney, PE, FACI, The Coleman Law Firm, LLC, Minneapolis, MN

Attorney Jeffrey W. Coleman focuses his practice on construction law, professional liability defense, concrete construction, and general business law, including insurance and coverage. A licensed structural engineer with more than 30 years of experience as a practicing attorney and a licensed professional engineer in Minnesota, Iowa, and Wisconsin, Coleman provides clients with a single go-to resource for both legal and risk-management issues. He has represented design professionals in all matters of their business, including defense of multimillion-dollar design defect and negligent construction administration claims. Nationally known for his knowledge and experience in the area of concrete construction, Coleman is the author of "Legal Issues in Concrete Construction" and is the only attorney ever to be named a Fellow of the American Concrete Institute (FACI).

Coleman received a bachelor's degree in civil engineering and a master's degree in structural engineering from Iowa State University and is a cum laude graduate of the William Mitchell College of Law.

He served on the national board of directors of the American Concrete Institute from 2012–2015, has served five terms on the American Council of Civil Engineering Companies (ACEC) Minnesota, and was the 2013 President of the Minnesota Concrete Council.

Moderator: *Dan Murphy,* PE

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2018 STRUCTURAL ENGINEERING Seminar Series

Registration

January 30,
February 6, 13, 20, 27,
and March 6

Please print or type

Last Name First Name

Affiliation

Email

Work Address (Street)

City State Zip Code

Daytime Telephone

Please mark amount enclosed or amounts to be billed.

$90 per session X _____ sessions = $_____

☐ I am registering for all six sessions (registration form must be mailed or faxed), $450 total due

The six-session discount is only available for one individual participant, not multiple participants.

Method of Payment

☐ I have enclosed a check or money order payable to the University of Minnesota.

☐ Please bill my organization (purchase order or letter of authorization attached).

☐ Please charge the amount indicated above to my

☐ VISA ☐ MasterCard ☐ American Express ☐ Discover

Card Number Expiration Date

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Name as it appears on card (please print)

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Register online at ccaps.umn.edu/structural

Mail registration to University of Minnesota, College of Continuing and Professional Studies: Registration, 353 Ruttan Hall, 1994 Buford Ave, Saint Paul, MN 55108

Fax registration with credit card or purchase order to 612-624-5359.

For registration questions, call 612-625-2900 or email ccapsreg@umn.edu.

Please mark the session(s) you plan to attend.

☐ **January 30**
Achieving Durability in Post-Tensioned Structures: A Look at Lessons We Have Learned (or Need To)
STRL-001

☐ **February 6**
Where Have All the Good Sites Gone? Tackling Construction Challenges in Tight Urban Sites and in Poor Soil Conditions
STRL-002

☐ **February 13**
Ten Years After the 35W Collapse—What Has Changed?
STRL-003

☐ **February 20**
ASD vs SD—A Masonry Cage Fight
STRL-004

☐ **February 27**
Aluminum and Stainless Steel Structural Design Standards
STRL-005

☐ **March 6**
Engineering Ethics
STRL-006

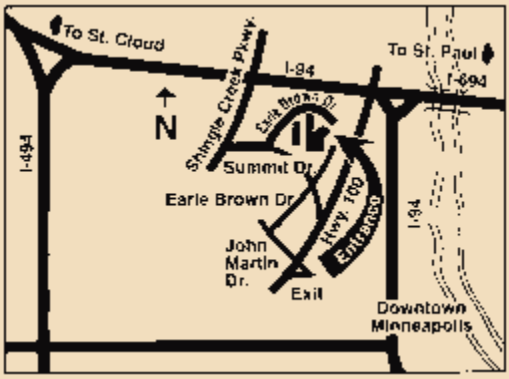
If your check is returned because of insufficient funds, a closed account, or because you have made a stop payment request, you will be charged a check-handling fee of $20.

The information on this form is private data, used to identify and locate you, obtain payment, and enable instructors to better know their audience. Name, address, and payment method are mandatory.

Seminar Location

Seminars will be held at **Earle Brown Heritage Center,** 6155 Earle Brown Drive, Brooklyn Center, MN. All seminars will be held on **Tuesdays** from **1:00–4:15 p.m.** Seminars include a 15-minute break.

Parking is free. Directions and parking information can be found at www.earlebrown.com/meetings/contact (scroll down for Directions).



Earle Brown Heritage Center

6155 Earle Brown Drive
Brooklyn Center, MN
763-569-6300

Registration

The fee for each individual seminar is **$90** or a discounted fee of $450 for the entire series *(the six-session discount is for one individual participant, not multiple participants).* Fees include tuition, instructional materials, and refreshments. **We encourage you to register for the entire series and receive the discounted fee.**

Refunds—minus a $30 processing fee—will be issued if cancellation is received in writing at least five business days before the date of the seminar. Refunds will not be issued to participants who have signed up for the entire series but miss individual seminars. The University of Minnesota reserves the right to cancel seminars if necessary; in this case, a full refund will be made.

Continuing Education Units

Each seminar session awards 0.3 CEUs. The entire seminar series awards 1.8 CEUs. One CEU is defined as 10 contact hours in an organized continuing education activity under responsible sponsorship, capable direction, and qualified instruction.

For Registrations Questions:

612-625-2900 or email ccapsreg@umn.edu

For Program Information:

612-624-4938 or email ccapsconf5@umn.edu
