



MNSEA

Minnesota Structural Engineers Association

SEMINAR AND TRADE SHOW – MAY 8, 2018

Special Structures Series

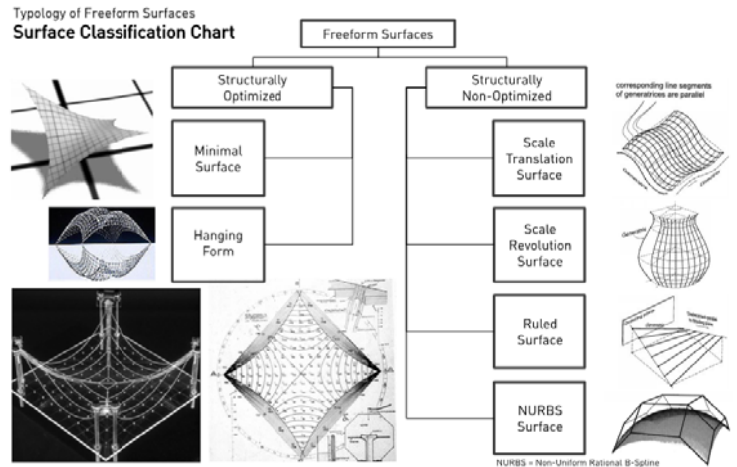


SESSION 1 – BEYOND TENTS Fabric Structures for Buildings

Lack of access to knowledge has been a significant barrier for consultants and building owners who might wish to use fabric technology. David Bowick has spent much of the last decade trying to break down this barrier. This session will introduce the basics of working with fabric, from structural forms to software; from codes to detailing and contracts. The attendee should leave feeling inspired and empowered. Picture: Recreation Outdoor Center in St. Louis Park, MN.

SESSION 2 - GRID SHELL STRUCTURES on Freeform Surfaces

Architectural design continues to push the limits of the structural glazing industry. For engineers, the support of complex glazing is a unique challenge which demands detailed design of geometric forms, strict control of fabrication and erection tolerances, and innovative solutions for structural analysis and connection design of structures that often are not addressed directly by building or design codes. This presentation focuses on the engineering design process of Freeform “grid shell” structures and the technologies that have been developed to solve the issues related to the support of glazing systems on complex structural forms.



SESSION 3 - WIND TURBINE FOUNDATIONS Structural Design Principles and Practices

Wind turbine generators (WTG's) produced about 6% of United States electricity in 2017 and continue to be one of the leading sources of new electric generation built each year. Consequently, more and more structural engineers will become involved with the design and evaluation of the support structures including towers and foundations. This session will discuss structural design principles and practices for the tower support foundation, including the unique loads produced by the wind turbine, design standards, steps in the design process, and construction sequence. Real project examples, illustrations, and photos will be used to help present the topic.

See page 3 for speaker biographies.

The seminar will provide 3.0 PDH credits. Certificates will be distributed at the end of the seminar.

TRADE SHOW:

Suppliers from many areas of the construction industry ranging from fabricators to providers of design tools will be available to update us on products and services. Suppliers will be happy to answer your questions and provide solutions for your every-day challenges.

AGENDA: MNSEA MAY SEMINAR TRADE SHOW

7:00 a.m. Registration, Start of Trade Show, Breakfast	10:00 a.m. Session 2
7:40 a.m. MNSEA General Meeting	11:00 a.m. Trade Show Wrap-up, Snacks
8:10 a.m. Trade Show Introductions	11:45 a.m. Session 3
8:30 a.m. Session 1	12:45 p.m. Raffle and Prizes
9:30 a.m. Trade Show Break	

LOCATION:

[Marriott Minneapolis West](#) / 9960 Wayzata Blvd, MN Minnetonka / 952.544.4400
(Located on the north frontage road of I-394 between Hwy 169 & Hopkins Crossroad – directly across from the ACEC/MN office)

COST:

MNSEA or SEAWI member \$100
General Attendees (non-member) \$150
Student \$40
Includes General Meeting, Breakfast, Morning Seminars, and Trade Show

REGISTRATION:

By Internet:
[Online Registration Link](#)

By Fax or E-mail: Please return this form to Melissa Langowski at the American Council of Engineering Companies of Minnesota by fax 952.593.5552 or e-mail: melissa@acecmn.org no later than Friday, April 27, 2018. **Space is limited, so register early.**

****for registration refund – 48 hours minimum cancellation required****

If you have any questions about this seminar, please contact Andrew P. Agosto with Uni-Systems Engineering Inc. at 763.404.8832 or e-mail: aagosto@uni-engineer.com

Name	Firm	email	Registration	Total
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Sponsor and Exhibitor space is limited. Please contact Andrew P. Agosto at 763.404.8832 or e-mail: aagosto@uni-engineer.com to reserve your space.

DAVID BOWICK, P.Eng



David Bowick is a professional engineer licensed across Canada and working around the world. Having lectured and taught in architecture faculties of many schools, his unique talent is for working with architects, developing structures that fulfill and enhance their design vision. This effort has received awards from the local Engineering societies, the Fabric, Wood, Steel and Concrete industry groups as well as contributing to numerous architectural award winning projects. A particular passion is tensile structures, the major focus of his personal engineering efforts for the past 10 years. Having completed many recognizable projects, including a role in Canada's recently completed BC Place Stadium, David is currently completing a post professional master's degree in tension structures at the Institute for Membrane Structures in Germany and sits on the board of the Fabric Structures Association.

RYAN MARKGRAF



Ryan Markgraf is a Senior Project Engineer at Novum Structures in Menomonee Falls, WI. Since starting with Novum in 2009, Ryan has worked on a wide variety of structural glazing projects around the world. Projects include building envelopes with glazed façades and skylight structures, free-form and spatial truss structures, glazed canopies, stages, and screen walls. Ryan is a 2011 graduate of Milwaukee School of Engineering with a B.S. Architectural Engineering and M.S. Structural Engineering.

CHRIS KOPCHYNSKI, PE



Chris Kopchynski has been a consulting engineer since 1988 and has been with Barr since 1994. He graduated from the University of North Dakota with B.S. degrees in civil engineering and engineering management, and from the University of Alberta with a master's in business administration. At Barr, he is a vice president and senior structural engineer primarily focusing on service to wind energy clients. He and Barr's staff have been involved with more than 400 designs for approximately 22,500 foundation structures supporting 40,000 MW of wind turbines.