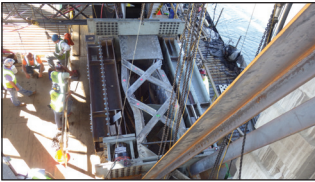


# 2017 Twenty-Ninth Annual Fall Bridge Conference



**Friday, November 17, 2017  
7:15 am - 5:45 pm**

**Millennium Hotel Buffalo  
Buffalo, New York**

*[www.abcdwny.org](http://www.abcdwny.org)*





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## A Brief Look at Our History

The deplorable condition of our bridges in 1978 led to the formation of the Western New York Chapter, which became the second chapter to formally organize on May 26 and June 2, 1978. The founding members met at the Williamsville Inn, where officers were elected, by laws were adopted, and “dinner meetings” became the norm. The early association focused on promoting the need for additional bridge funding, and pushed hard for the successful passage of the ***Surface Transportation Bill of 1978 (the Howard Bill)***.

During the years that followed, the ABCD focused on becoming an organization dedicated to education in all facets of the bridge industry. Contractors, government agencies, educators, suppliers, and consultants could all find a place for their cause within the organization. Events such as the annual Kenneth Rybarczyk Bridge Contest, the Fall Bridge Conference, regular Technical Education Seminars, Monthly Dinner Meetings, the Annual Bridge Award, Scholarship Golf Tournament and Awards, Joint Association Meetings, participation in Engineer’s Week, support of the local university Steel Bridge Teams, E3 Fair, Future Cities participation, support for BEAM, and our continued support of the Statewide Conference on Local Bridges in Syracuse are all part of the Association’s yearly activities. Today, ABCD WNY boasts a membership of nearly 300 and is as active as ever. Our goal remains to increase recognition of our industry, promote fellowship among members, and provide the very best in educational opportunities for all involved in bridges.



## Message from the President

On behalf of the Officers and the Board of Directors of the Association for Bridge Construction and Design – Western New York Chapter (ABCD-WNY), I welcome you to our Twenty-Ninth Annual Fall Bridge Conference.



Once again, we are near the full capacity of our venue with over 270 participants. This is a testament to our continued success at providing a solid program of presentations on bridge-related topics for the bridge professionals of Western New York State. The Fall Conference has served as a forum for professionals, like you, to exchange ideas and information. Over the years, we have been fortunate to secure presenters from around the country, as well as locally, from bridge owners, designers, constructors and material suppliers. We have also had presentations on research projects and new technology from leading universities.

This year's conference chairman, our Vice President, Ron Centola has developed another outstanding conference. Today's program includes a wide variety of technical topics to further your knowledge. During breaks, you will also have the opportunity to visit with our conference exhibitors and network with other professionals in the industry. We encourage you to gather as much knowledge as possible





from today's sessions and enjoy the opportunity to connect with many of the other professionals attending the conference.

The success of this event and our entire organization is a direct result of your participation. Whether you are a conference attendee, presenter, exhibitor, advertiser, sponsor, board member or just someone who helps out from time to time, your contribution is what makes this organization great.

Thank you for your participation and I look forward to visiting with you throughout the day and at future ABCD events. A special thank you to Ron Centola, our presenters, sponsors, advertisers, and exhibitors for making today's conference possible. Please enjoy the day at the Millennium Airport Hotel, host of our Twenty-Ninth Annual Fall Bridge Conference.

Best regards,



Mark R. Laistner, PE  
2017-2018 ABCD President  
ABCD of WNY



## **ABCD WNY Hall of Presidents**

<b>1978-1979 Phillip F. Frandina, PE</b>	<b>2000-2001 Ronald J. Klinczar, PE</b>
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<b>1985-1986 Gerald M. Kapsiak, PE</b>	<b>2007-2008 Mark Laistner, PE</b>
<b>1986-1987 Douglas E. May</b>	<b>2008-2009 Lawrence Mathews, PE</b>
<b>1987-1988 William G. Leslie, PE</b>	<b>2009-2010 Stephen Gauthier, PE</b>
<b>1988-1989 R. Charles Patterson</b>	<b>2010-2011 Seth Kaeuper, PE</b>
<b>1989-1990 Fredrick P. Meli, PE</b>	<b>2011-2012 Mark Mruk, PE</b>
<b>1991-1992 Fredrick P. Meli, PE</b>	<b>2012-2013 Chris Sichak, PE</b>
<b>1992-1993 Earl E. Dubin, PE</b>	<b>2013-2014 Jeffrey J. Blank, PE</b>
<b>1993-1994 Sam Anthony, PE</b>	<b>2014-2015 Daniel D. Duprey, Jr., PE</b>
<b>1994-1995 Joseph S. Logan, Jr., PE</b>	<b>2015-2016 Kevin H. Miller, PE</b>
<b>1995-1996 Richard Ulmer, PE</b>	<b>2016-2017 John Papponetti, PE</b>
<b>1996-1997 Brian Rose, PE</b>	<b>2017-2018 Mark Laistner, PE</b>
<b>1997-1998 Fredrick P. Meli, PE</b>	
<b>1998-1999 John Gast Jr.</b>	
<b>1999-2000 Thomas R. Kiener, PE</b>	





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William Rugg, PE, Co-Chair



# 2017 ABCD Fall Conference

## Schedule & Speakers

**7:15 - 8:15 am**    **Registration, Coffee, Exhibits**

**8:15 - 8:30 am**    **Welcome and Introduction**

### Session 1                      2 PDH Credits

8:30 - 9:30 am    ***The Liberty Bridge: Investigating the Global Behavior Due to Fire Damage***

Andrew Adams, PE - Modjeski and Masters  
Nohemy Galindez, PhD, PE - Modjeski and Masters

9:30 - 10:00 am    ***Bridge Failures and Lessons Learned***

Eric Thorkildsen, PE - Greenman Pedersen, Inc.

10:00 - 10:30 am    ***Truss Removal of the Canandaigua Road Bridge over Erie Canal***

Lou Recchia, PE - Creighton Manning Engineering, LLP

**10:30 - 11:00**            **Breaks and Exhibits**

### Session 2                      1 PDH Credit

11:00 - 12:00    ***Large Scale, High Production Preassembly and Erection of Girder Units of the New Tappan Zee Bridge***

Tom Zieman, PE - Zieman Engineering, LLC

**12:00 - 1:00 pm Lunch**





# 2017 ABCD Fall Conference

## Schedule & Speakers

### Session 3

2 PDH Credits

**1:00 - 1:30 pm**    **Scholarship Awards and Research Grant Presentation**

1:30 - 2:00 pm    **Field Determination of Dead Load Stresses in Bridges**

Andreas Stavridis, PE - University of Buffalo  
Sina Yousefian - University of Buffalo

2:00 - 2:30 pm    **Heat Management and Monitoring for Mass Concrete**

Chris Ligozio, PE - KPFF Consulting Engineers  
Danielle Farabell, EIT - BVR Construction Company, Inc.

2:30 - 3:30 pm    **The Replacement of the Rexford Bridge - the Site, the History and the Bridges**

John Grady, PE - Ravi Engineering and Land Surveying, PC

**3:30 - 4:00 pm**    **Breaks and Exhibits**

### Session 4

1 PDH Credit

4:00 - 5:00 pm    **Steel Girder Erection of Replacement of Bailey Ave. Bridges Over Cazenovia Creek and the Buffalo River and the Steel Girder Erector's Considerations for Safety Erecting Bridge Steel**

Chip Stephenson II, PE - BVR Construction  
John Szvoren, PE - BVR Construction

**5:00 - 6:00 pm**    **Exhibitor Reception**



# 2017 ABCD Fall Conference

## Speaker Abstracts & Biographies

### The Liberty Bridge: Investigating the Global Behavior Due to Fire Damage

#### Abstract:

On September 2<sup>nd</sup>, 2016, a fire occurred on the Liberty Bridge in Pittsburgh, PA, that resulted in a severely damaged bottom compression chord member. As part of the emergency response, a global 3D analysis of the bridge was performed to evaluate the capacity of the members. The analysis results were combined with calculated capacities and field measurements of strain and displacement to produce real-time ratings of the main trusses during jacking. Based on the results, the bridge was reopened to traffic following jacking operations. Additional rating calculations were performed after removal of the jacking frame and the final repairs of the bottom lateral bracing system.

#### Presenters:

##### Andrew R. Adams, PE

Andrew received his BS in 2007 and MS in 2009, both in Civil Engineering from Penn State University. He joined Modjeski and Masters in the summer of 2009 and has worked on a variety of rehabilitation, new design and emergency response projects, including the seismic rehabilitation of the Manhattan Approaches to the Robert F. Kennedy Triborough Bridge, design of the new I-74 steel arch bridges over the Mississippi River, and investigations of the Delaware River Bridge truss fracture. He is a licensed Professional Engineer in the Commonwealth of Pennsylvania.



##### Nohemy Y. Galindez, PhD, PE

Dr. Galindez joined Modjeski and Masters in 2009, after receiving her PhD degree in Civil Engineering with emphasis in Structures, from West Virginia University. She also worked on the lateral flange bending effects on exterior girders under construction loads. Her professional experience has been focused in the analysis and design of bridge structures, including stability analyses of arch bridges and redundancy analyses of fracture critical members. She has been part of the design team for key projects such as the I-74 steel arch bridges over the Mississippi River, and the Hawk Falls Bridge replacement on the Northeast Extension of the PA Turnpike. She is a licensed Professional Engineer in the state of New Jersey.





# 2017 ABCD Fall Conference

## *Speaker Abstracts & Biographies*

### Bridge Failures and Lessons Learned

#### **Abstract:**

Failures of bridges in the United States result in investigations and lessons learned, with recommendations on how to prevent future failures for similar bridge types. Such failures can many times be attributed to multiple actions either man made or environmental occurring simultaneously creating a perfect storm for failure. Federal regulations mandate that bridge inspectors take refresher training to keep up to date on new technology, techniques and inspection recommendations based on bridge failures. The National Highway Institute, the training arm of the Federal Highway Administration, provides nationwide bridge inspection refresher training. This presentation highlights portions of the course related to lessons learned from bridge failures and how bridge inspectors can help.

#### **Presenter:**

#### **Eric Thorkildsen, PE**

Eric Thorkildsen has a BS in Civil Engineering from Rutgers University, 1984. His area of study included structures and geotechnical engineering. He has been involved with bridges for the past 33 years initially working for the New Jersey and California DOTs and then on to private practice. He has specialized in seismic design, underwater bridge inspection and ancillary sign inspection. For the past 5 years Eric has been a lead instructor for the NHI bridge inspection refresher course and as such has had the opportunity to interact with bridge inspectors nationwide on bridge distress and failure. He has earned the NHI "Instructor of Excellence" award for several years. He currently lives in Albany, NY.





# 2017 ABCD Fall Conference

## *Speaker Abstracts & Biographies*

### Truss Removal of the Canandaigua Road Bridge Over the Erie Canal

#### **Abstract:**

This presentation will focus on the removal of a 103 year old truss bridge carrying Canandaigua Road over the Erie Canal. The existing bridge is a single lane 181 foot long structure built in 1912 and has been deemed historical by the State Historical Preservation Office. In order to construct a new replacement structure, the existing bridge had to be salvaged. The contractor decided to float the existing truss across the canal and dismantle it on the approach. This presentation will discuss the procedure and challenges that had to be overcome to move this historical truss across the Erie Canal.

#### **Presenter:**

#### **Louis Recchia, PE**

Lou Recchia, PE has 35 years of experience with Bridge Design and Construction. He previously worked for the State Department of Transportation for 30 years as a bridge design engineer and in the Foundations and Construction Unit where he was responsible for identifying and resolving constructability issues during the design and construction phases of bridge projects. He has worked on some of the largest and most challenging bridge projects in the State. He is currently the Quality Control/Quality Assurance (QA/QC) Engineer for Creighton Manning working in the Structures group. He is primarily responsible for the review of Bridge Designs, Contractor Submissions and the development of Contractor support designs (eg: Erection/Demolition and shoring plans). He earned a Bachelor of Science degree in Civil Engineering from Clarkson University. He is a licensed professional engineer in New York State.





# **2017 ABCD Fall Conference**

## ***Speaker Abstracts & Biographies***

### **Large Scale, High Production Preassembly and Erection of Girder Units of the New Tappan Zee Bridge**

#### **Abstract:**

The new Tappan Zee Bridge consists of over two miles of plate girder approaches that are being built off-site in 135 large preassemblies, up to 420 feet long and weighing up to 2200 kips, which are then transported to the site and erected by a large barge crane. This presentation will focus on construction methods used to preassemble and erect the girders. The first part of the presentation will describe the yard where the units are being assembled and loaded on to barges at a rate of over 3,000,000 lbs. of steel per week. Various custom equipment which constitute an assembly line will be presented. The second part of this presentation will describe the process of erection, the hydraulically adjustable lifting frame used to set the girders, stability and deflections of the girders, and the connection of cross frames between the assemblies.

#### **Presenter:**

#### **Tom Zieman, PE**

Tom Zieman is founder and Principal at Zieman Engineering, LLC, which formed in 1992. The firm is located in Stamford, CT and specializes in structural and construction methods engineering on complex construction projects. Notable projects by the firm have included Brooklyn Bridge, Richmond/San Rafael Bridge, Providence River Bridge, the Las Vegas High Roller Ferris Wheel, Madison Square Garden and many others. Prior to starting his firm he worked for as a Field Engineer, Project Engineer and Project Manager for a general contractor in New York City that specialized in complex bridge work. He has a B.S and M.Eng in Civil Engineering from Cornell University.





# 2017 ABCD Fall Conference

## Speaker Abstracts & Biographies

### Field Determination of Dead Load Stresses in Bridges

**Abstract:** This presentation will discuss the results of a study conducted to investigate the feasibility of a method proposed to assess in-situ the dead-load stresses in concrete members commonly used in bridges. This is a critical step towards load-rating a bridge as the state of stresses carried by its members affects its load capacity. The proposed approach combines the concepts behind the strain-relief method used to estimate the stress inside a steel plate by hole drilling, as described in ASTM E837, and the flatjack test used to estimate the compressive stress carried by masonry units inside masonry walls discussed in ASTM C1196. The method examined here involves a relatively small cylindrical hydraulic jack and a set of strain gages. The strain gages are first installed on the concrete surface around the location where a small hole is drilled. The jack is inserted then in the hole and pressure is applied so that the strain relief caused by the hole drilling is restored. Such a jack is not currently available and it is under development by BDI. A numerical study is conducted to simulate the proposed test procedure and determine the ideal hole dimensions required for accurate measurements while minimizing the damage to the member. To this end, a refined finite element model of a typical concrete member is developed and it is subjected to different loading scenarios while the depth and height of the hole are varied. The parametric study also considers various orientations and distances for the location of the strain gages. The results of this study, which will be discussed in detail in the presentation, indicate that even a hole with a diameter as small as 1 inch can drastically change the strain profile on the surface of the element at distances smaller than 2 inches from the center of the hole. This finding confirms the feasibility of the proposed method and has provided much needed input for the development of the cylindrical jack.

#### Presenters:

##### Andreas Stavridis, PE

Andreas Stavridis is an Assistant Professor of Structural Engineering at the University at Buffalo. He has a MS and PhD degrees in Structural Engineering from the University of California, San Diego and a BS degree in Civil Engineering from the National Technical University of Athens, Greece. His research interests focus on the assessment and improvement of the seismic performance of existing and new reinforced concrete and masonry structures. He tests large-scale structures in the laboratory and actual structures in the field; develops and validates detailed and simplified numerical and analytical tools to simulate the seismic performance of such structures; develops system identification methods to enable localization and quantification of damage; and assesses its effect on the remaining strength of structures. The assessment methodology of infilled RC frames he developed with his students at UB is adopted in ASCE 41-17. He has peer reviewed the new seismic code on infilled concrete frames in New Zealand, and he has taught short courses on the seismic performance of masonry and concrete structures in Italy, Nepal and Ecuador.



**Sina Yousefian** is a PhD student in Structural Engineering at the Civil, Structural and Environmental Engineering Department at the University at Buffalo. His doctoral research focuses on the health monitoring and seismic assessment of existing structures. He was the graduate student in charge of the dynamic tests on two actual buildings of two and ten stories. Both tests involved progressive damage scenarios. Sina has also led the dynamic tests of a deteriorated RC bridge on campus to investigate its dynamic properties and the feasibility of further laboratory test on its elements. He also participated in the reconnaissance efforts following the 2016 Ecuador earthquake by assessing two hospitals and two commercial buildings.





# 2017 ABCD Fall Conference

## *Speaker Abstracts & Biographies*

### **Heat Management and Monitoring for Mass Concrete**

#### **Abstract:**

Presentation will discuss thermal management for mass concrete placement. KPFF provided mass concrete consulting services for BVR Construction, Inc. during replacement of the ice sluice gates on a hydro-electric dam in Massena, NY. The project included mass concrete infill of gate vaults in the existing dam and construction of concrete walls above the vaults. Thermal management was controlled by temperatures of existing concrete temperatures in the vault at the boundary of the infill concrete.

Although not a bridge project, the thermal management requirements were similar to those becoming more common for mass concrete in bridge construction.

Speakers will present thermal management practices in general, along with the program developed for the project, including: optimization of concrete mix design, thermal modeling, development of post cooling system, design and implementation of a thermal monitoring system and real time evaluation of thermal data.

#### **Presenters:**

##### **Chris Ligozio, PE, SE**

Chris Ligozio, PE, SE, is a Senior Engineer at KPFF Consulting Engineers. He has a BS and MS of the civil engineering program at SUNY Buffalo and currently works from Rochester as Senior Structural Engineer with the Chicago Office of KPFF. He has 25 years' experience in bridge design and evaluation, with expertise in the inspection, evaluation, and repair of bridges and other infrastructure. He has been involved in the testing, inspection, and construction of cable stayed bridges for over 15 years. He is a registered professional engineer in New York and a registered structural engineer in Illinois.



##### **Danielle Farabell, EIT**

Danielle Farabell, EIT, BVR Construction Company – Danielle has a BS of the civil engineering program at SUNY Buffalo and is currently working towards obtaining her PE license as a project manager for BVR Construction Company. She has been a part of several rehabilitation projects for Hydro-electric plants.





# 2017 ABCD Fall Conference

## Speaker Abstracts & Biographies

### The Replacement of the Rexford Bridge - the Site, the History and the Bridges

#### Abstract:

The Rexford Bridge carries Route 146 over the Mohawk River/Barge Canal, connecting the Towns of Niskayuna in Schenectady County and Clifton Park in Saratoga County, near the hamlet of Rexford. This site is steeped with history and there have been numerous river crossings built at this location over the past 200 years, including two Erie Canal Aqueducts and several bridges.

The existing Rexford Bridge, built in 1964, was structurally deficient and was in dire need of rehabilitation or replacement. The project corridor is a heavily travelled commuter route, has experienced significant traffic congestion for decades, and has had a high rate of accidents. It also lacked any accommodations for pedestrians or bicycles. Discussions about replacing the existing Rexford Bridge have been ongoing for over 25 years.

In 2015, the NYSDOT awarded a \$32.5 million Design/Build contract to replace the existing 727 foot long bridge two-lane bridge with a new four-lane bridge which will also have a 10 foot wide multi-use path. This high profile bridge replacement project is designed to improve safety and ease congestion in the surrounding area. The project includes the complete replacement of the multi-span structure and realignment of the existing approaches, including the construction of a roundabout on the Niskayuna end of the bridge. A multi-use path along Route 146 will connect Riverview Road in Rexford and the Mohawk-Hudson Bike-Hike Trail in Niskayuna.

In this presentation, we will discuss the history of the site, including the historic Erie Canal and aqueduct remnants (and their impact on the new alignment), and the previous bridge crossings. I will also highlight the process of constructing the new bridge and the roadway improvement, including the many challenges we faced.

#### Presenter:

**John E. Grady, PE**

Mr. Grady spent 34 years with NYSDOT, mostly in construction management roles, including eleven years as the Assistant Director of the Office of Construction. During his NYSDOT career he took on many special assignments, including as Special Deputy to the Commissioner for the Reconstruction of the FDR Drive in Manhattan, NYSDOT's lead representative for the 2001 World Trade Center Response, and Project Director for the \$145 million Patroon Island Bridge Project. He retired from NYSDOT in 2013 as the Regional Construction Engineer for the Capital District Region. He then joined CHA as the Manager of their Construction Engineering Services Group. In 2015, he moved to Ravi Engineering and Land Surveying as a Construction Manager, and is currently serving as the Resident Engineer on the Rexford Bridge Project. Mr. Grady is a graduate of Clarkson University with a BS degree in Civil and Environmental Engineering, and is a Licensed Professional Engineer in New York and Vermont.





# 2017 ABCD Fall Conference

## *Speaker Abstracts & Biographies*

### **Steel Girder Erection of Replacement of Bailey Avenue Bridges Over Cazenovia Creek and the Buffalo River and the Steel Girder Erector's Considerations for Safety Erecting Bridge Steel**

#### **Abstract:**

This presentation will discuss the erection of bridge girders for the new Bailey Avenue Bridges over Cazenovia Creek (176 LF span) and Buffalo River (232.5 ft. span). Both bridges involved spliced girders, up to more than eight (8) LF deep, and both were connected over the waterways.

Steel Girder Erector's Considerations will provide a summary of conditions that get evaluated to determine safe and efficient procedures for steel girder erection from a contractor's perspective. Examples and details will be used from Bailey Avenue and other bridges.

#### **Presenters:**

**H.L. "Chip" Stephenson II, P.E.** - President, BVR Construction Company, Inc.

Chip is a 1979 graduate of Cornell University with a Bachelor of Science degree in Agricultural Engineering. He has 37 years working in heavy civil construction on steel bridges, moveable dams & bridges, hydroelectric facilities, tunnels, and other waterway structures. He is a New York State registered professional engineer.



**John Szvoren, P.E.** - Vice President, BVR Construction Company, Inc.

John is a 2009 graduate of Clarkson University with a Bachelor of Science degree in Civil Engineering. John has eight (8) years of engineering experience focused on bridge steel erection and other engineering requirements supporting BVR's heavy specialty construction projects.





## **2017 ABCD Fall Conference**

### ***Exhibitors***

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### 2017 ABCD Academic Scholarships

The Western New York Chapter of ABCD has been providing college scholarships to area students and schools since 1998. There are currently 3 different types of scholarships offered to students enrolled in an undergraduate 2, 4, or 5 year bridge related curriculum. The scholarships are awarded based on eligibility, scholastic performance, a written essay, extra-curricular activities/employment, and references.

The award and scholarship types are as follows:

- \$6,000 Phillip F. Frandina Memorial Scholarship
- \$3,000 ABCDWN Y Bachelor's Degree Scholarship
- \$2,000 ABCDWN Y Associate's Degree Scholarship





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## Philip F. Frandina, PE, LS Memorial Undergraduate Scholarship



### Congratulations to Scholarship Recipients:

2017 – Rebecca C. Kohlman, RIT, 2018

2016 – Cody Coonradt, UB, 2017

2015 – Ryan O'Malley, UB, 2016

2014 – Edward Almeter, UB, 2015

2013 – Dana White, UB, 2014



The WNY chapter of ABCD was founded in 1978 and Phil Frandina served as its first president. In 2012, Phil endowed this scholarship to assist future bridge engineers to complete their studies. Sadly, he passed away in February 2013 at the age of 84, before the first scholarship was awarded. ABCD and the Frandina family jointly evaluate applications to select the recipients.

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# TRANSPORTATION INNOVATION

As Lead Designer for our second consecutive NYSDOT Region 4 design-build project, T.Y. Lin International worked side by side with the contractor to fast track the \$30 million I-390 Interchange Improvements project. This complex project highlights originality and design innovation. T.Y. Lin International and Crane-Hogan Structural Systems declined traditional detours in favor of temporary ramps designed and constructed to maintain traffic safely and efficiently during bridge construction. Our distinctive slant-leg rigid frame design for the bridge over the Erie Canal eliminated the need for tall piers, large foundations, bearings, and joints while meeting aesthetic, efficiency, and constructability goals and yielding future maintenance savings. Our team completed the project on time and within budget, hallmarks of T.Y. Lin International projects.

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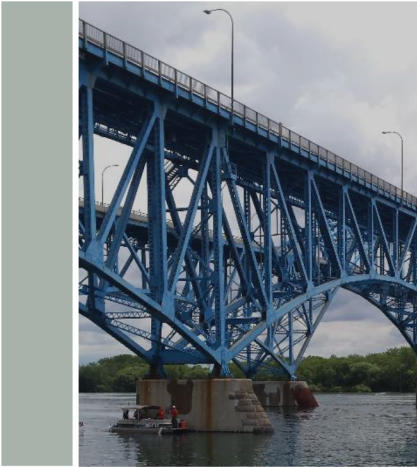
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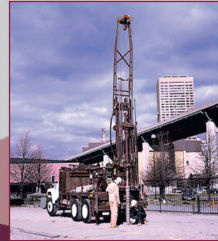
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# History of ABCD of WNY Research Grants

## **2011 – 2013 – BRIM (Bridge Information Modeling)**

\$5,000 Fellowships were awarded to several Graduate and PHD candidates to conduct a research project on advancing a bridge oriented integrated project delivery method which is called BRIM (Bridge Information Modeling). The project will extend the knowledge base of applying virtual design and construction approaches to bridges.

Findings were presented at various ABCD monthly meetings or Spring Conferences.

## **2014 - 2015 – Extreme Event Response of Ultra-High Performance Concrete for Segmental Columns**

\$10,000 Research Grant awarded to:

Dr. Pinar Okumus, Dr. Andrew Whittaker, Jerome O'Connor – University at Buffalo

Findings were presented at the 2015 ABCD Fall Conference

## **2016 – Field Determination of Dead Load Stresses in Concrete Bridges**

\$10,000 Research Grant awarded to:

Jerome O'Connor, PE, Executive Director on behalf of  
Technical POC and Principal Investigator Andreas Stavridis, PhD – University at Buffalo

Findings to be presented at today's 2017 ABCD Fall Conference

## **2017 – Candidates**

Investigating Structural Capacity of Corroded Steel I-plate Girder Bridges  
Proposed by: Amanda Bao, PhD, PE, Associate Professor – Rochester Institute of Technology

To Post, or not to Post: Capacity and Analysis of Corroded Steel Girder Bridges

Proposed by Dr. Pinar Okumus, Assistant Professor – University at Buffalo

Findings will be presented at the 2018 ABCD Fall Conference

***Several of the Fellowships and Research Grants have been significantly co-funded by the Federal Highway Administration.***



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# Association for Bridge Construction and Design



The Western New York Chapter was established in 1978 and is one of seven chapters nationally.

The current chapters include the following:

Buffalo, NY (Western New York Chapter, est. 1978)

[www.abcdwny.org](http://www.abcdwny.org)

New York, NY (Northeast Chapter, est. 1978)

Albany, NY (Eastern New York Chapter, est. 1994)

[www.abcdeny.org](http://www.abcdeny.org)

Harrisburg, PA (Susquehanna Chapter, est. 2001)

[www.abcd-susquehanna.org](http://www.abcd-susquehanna.org)

Pittsburgh, PA (Pittsburgh Chapter, est. 1976)

[www.abcdpittsburg.org](http://www.abcdpittsburg.org)

Columbus, OH (Central Ohio Chapter, est. 2013)

[www.abcdcoh.org](http://www.abcdcoh.org)

Cleveland, OH (Northeast Ohio Chapter, est. 1998)

[www.abcdneoh.org](http://www.abcdneoh.org)





## 2017 ABCD Model Bridge Contest - Buffalo

The 25<sup>th</sup> annual ***Kenneth T. Tybarczyk Memorial Model Bridge Contest*** was held February 16, 2017 at Classics V Banquet Hall in Amherst. Six (6) schools were represented by 119 students.

78 bridges were presented, judged and tested until failure. Bridges were checked to ensure all requirements were met on bridges' weight, length and height. Judging consisted of review and assignment of scoring for: Complexity, Engineering, Workmanship and Efficiency. The best possible score is 40 points.

The winning bridge built by Brandon Wade and Mike Orlowski from North Tonawanda High School weighed 126 grams, carried a load of 308 pounds and had a total score of 37.6 points.

In 2<sup>nd</sup> place was the team of Dave Zak, Colin Hebeler, and Noah Senft. 3<sup>rd</sup> place was the team of Isabelle Thompson and Yeva Sukhov with both groups from North Tonawanda.

### **2018:**

Event is scheduled for February 15, 2018 at Classics V in Amherst.



## Bridge Design Awards

For over 20 years, the Western New York Chapter of ABCD has recognized outstanding new and replacement bridge projects by awarding **Bridge of The Year** for the best project over \$2 million, and the best project under \$2 million. The nominations are due in the early spring of the following year, with the awards given out at our May meeting.

Four bridges were nominated for the Under \$2 million Category. The award was presented to:

### **Bridge Award Winner – Under \$2 Million**



### **Swift Mills Road Bridge over Murder Creek**

Owner: Erie County Department of Public Works

Engineer: Nussbaumer & Clarke, Inc.

Contractor: Concrete Applied Technologies Corporation (CATCO)





## Bridge Design Awards

There were three bridges nominated in the Over \$2 Million Category. The award was presented to:

### **Bridge Award Winner – Over \$2 Million**



### **Elmwood Avenue Bridge over NY 198 and Scajaquada Creek**

Owner: NYS Department of Transportation

Engineer: Bergmann Associates

Contractor: Concrete Applied Technologies Corporation (CATCO)

*Look for the upcoming request for nominations for the  
2018 ABCD Bridge Award in the near future.  
Mark your calendars as nominations will be due in April 2018.  
We look forward to seeing your nominations!*



# ABCD 2017-18 Meetings/Events

<b>January 2018:</b>	Topic - To Be Determined Rochester
<b>February 15, 2018:</b>	Buffalo Area Model Bridge Competition Presentation To Be Determined Classics V Restaurant, Amherst
<b>March 16, 2018:</b>	Annual Spring Technical Seminar Batavia Downs
<b>April 2018:</b>	Topic - To Be Determined Buffalo
<b>May 17, 2018:</b>	Annual Meeting / Bridge Awards / Election of Officers Red Osier, Stafford
<b>June 18, 2018:</b>	Annual Scholarship Golf Outing Terry Hills, Batavia



[www.abcdwny.org](http://www.abcdwny.org)







# ABCD Spring Seminar

Friday, March 18, 2018

## CALL FOR PAPERS

ABCD's Spring Conference will be held on March 18, 2018, at Batavia Downs, Batavia, New York. This has proven to be a very popular event, where attendance has grown to over 120 professionals, from inspectors to engineers to contractors. We are interested in all aspects of bridge construction and design, from lessons learned to the latest research, codes and design parameters, constructability and construction techniques.



If you have an interesting topic that would benefit the Bridge Community, consider submitting a presentation for our Spring Seminar.

Contact either Curt Krempa or David Jenkinson for further information:

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**2017**

**Twenty-Ninth Annual**

**Fall Bridge Conference**

**Buffalo, NY**

**Friday, November 17, 2017**

