

**President**

Christopher J. King, PE, SE  
Robinson Engineering, Ltd.  
17000 South Park Ave.  
South Holland, IL 60473  
(708) 210-5680

**Past President**

Robert T. Gorski, PE  
HDR Engineering, Inc.  
8550 West Bryn Mawr Avenue  
Suite 900  
Chicago, IL 60631  
(773) 380-7951

**President-Elect**

Darren Olson, PE  
Christopher B. Burke Engineering, Ltd.  
9575 West Higgins Road, Suite 600  
Rosemont, IL 60018  
(847) 823-0500

**Secretary**

William Cussen, PE  
Haeger Engineering, LLC  
1300 North Plum Grove Road  
Schaumburg, IL 60173  
(847) 230-3155

**Treasurer**

Emilie Becq-Giraudon, PhD, PE  
Chicago Department of Transportation  
30 North LaSalle Street, Suite 400  
Chicago, Illinois 60602  
(312) 742-0326

**Directors to 2010**

Thera A. Baldauf, PE  
(312) 831-3406  
Patrick M. Lach, PE  
(773) 792-8510  
Bryan Luke, PE  
(847) 823-0500

**Directors to 2011**

Gary Goodheart, PE  
(630) 975-7225  
Srikanth Panguluri, PE  
(773) 693-3800  
Zongshi Li, PhD  
(312) 567-3556

**Chair, Geotechnical Group**

Fran Miller, PE  
Geopier Foundation Company  
20 Danada Square West, Unit 285  
Wheaton, Illinois 60189  
(630)665-8585

**Chair, Structural Group**

Nathanael J. Morriss, PE, SE  
METRA  
547 West Jackson Boulevard  
Chicago, IL 60661  
(312) 322-6930

**Chair, Environmental Engineering & Water Resources Group**

Tatiana H. Papakos, CFM, PE  
Tetra Tech  
1 S. Wacker Drive 37th Floor  
Chicago, IL 60606-4651  
(312) 201-7434

**Chair, Urban Planning & Development Group**

Mike MacKinnon  
835 Violet Circle  
Naperville, IL 60540  
(630) 388-8550

**Chair, Transportation Group**

Tony Cerda, PE  
Stanley Consultants  
8501 West Higgins Road, Suite 730  
Chicago, Illinois 60631  
(773) 693-9624

**Chair, Younger Member Group**

Kurt A. Keifer, PhD, PE  
Dynatest Consulting, Inc.  
949 West Madison Street, Suite 407  
Chicago, IL 60607  
(217) 766-7124

## ILLINOIS SECTION AMERICAN SOCIETY OF CIVIL ENGINEERS

444 North Michigan Avenue, 12<sup>th</sup> Floor #429 \* CHICAGO, IL 60611

Phone \* (312) 283-5351

EMAIL: [Barb@isasce.org](mailto:Barb@isasce.org) \* WEBSITE: <http://www.isasce.org>



### ASCE ILLINOIS SECTION STRUCTURAL GROUP FEBRUARY DINNER MEETING

#### Unique Structural Engineering Aspects of the Heavy Industrial Power Sector – Dry Fork Power Station

**Adam Redd, P.E.**  
**Senior Associate**  
**Sargent & Lundy LLC**

**Abstract:**

Coal-fired power plants consist of heavy industrial equipment and support structures that have massive loads, unique loading conditions, and strict serviceability requirements. For example, the steam turbine-generator, which converts steam into electricity, is supported on a large concrete pedestal designed to dampen vibrations and limit differential deflections. The boiler, which combusts coal to produce steam, is suspended from massive steel plate girders spanning the building structure. The boiler building must also support large thermal expansion loads from ductwork and thrust loads from steam piping. The adjacent silo bay is designed to support multi-ton coal storage silos. These unique requirements impact the structural engineer's work and provide many engineering challenges. This presentation focuses on how these and other unique requirements were addressed during the structural engineering for Basin Electric Power Cooperative's Dry Fork Station, which is a 420 MW coal fired power plant currently being erected in the Powder River Basin in Wyoming.

**Speaker:**

Mr. Redd is a Senior Structural Associate at Sargent & Lundy LLC and is a graduate of the University of Illinois at Urbana-Champaign. He has 9 years of experience in the design of new fossil generating power plants and betterment projects at existing plants. His experience includes the structural analysis and design of foundations, concrete structures, ductwork, and structural steel. Mr. Redd also conducts condition assessment examinations for Sargent & Lundy. His condition assessment experience includes the examination and evaluation of 500 and 800 foot high concrete chimneys, as well as turbine-generator pedestals. Mr. Redd is a licensed engineer in Illinois.

**Date & Time:** Wednesday, February 17, 2010

Cocktails at 5:30 pm; Dinner at 6:00 pm

Presentation following dinner

**Location:**

Pazzo's  
311 South Wacker Drive  
Chicago, IL 60606

Self-service parking is available south of the building for \$10

**Cost:**

\$40 (\$20 for fulltime students) – RSVP on or before February 12, 2010

\$45 – without/late RSVP

Make checks payable to ASCE Structural Group

**RSVP:**

Victor E. Van Santen, [victor.vansanten@hdrinc.com](mailto:victor.vansanten@hdrinc.com), (773) 380-7966