Deep Foundations Institute
Technical Activities

Mary Ellen Bruce Large, P.E., D.GE.
DFI Director of Technical Activities
April 20, 2017
To bring together multi-disciplined individuals and organizations to find common ground and create a shared vision and a consensus voice for continual advancement in the deep foundations industry.
GeoInstitute-DFI MOU

- Memo of Understanding signed (2015)
- Cooperation on projects with mutual benefit
  - Joint events
  - Committee collaboration
  - Providing Student Chapter speakers
  - Compiling slates of speaker abstracts for GI sections
  - Dedicated liaisons
  - Engaging practice-oriented researchers in DFI committees
Technical Committees and Working Groups

- Augered Cast-in-Place Piles (CFA Piles)
- Codes and Standards
- Deep Foundations for Landslides and Slope Stabilization
- Driven Piles
- Drilled Shafts
- Ground Improvement
- Helical Foundations and Tiebacks
- Manufacturers, Suppliers and Service Providers
- Marine Foundations
- Micropiles
  - International Society for Micropiles
- Seismic and Lateral Loads
- Slurry Walls
- Soil Mixing
- Subsurface Characterization for Deep Foundations
- Sustainability
- Testing and Evaluation
- Tiebacks and Soil Nailing
  - European Monitoring & Instrumentation
- Women in Deep Foundations
- Seepage Control
- Electric Power System Foundations
- Energy Foundations
Free DFI Membership for 2017

- New DFI members
- Attendees of KC Geotechnical Conference
- Electronic version of DFI magazine
- All other member benefits
- Business card to Mary Ellen

Learn more about DFI membership at www.dfi.org

Collaboration, Networking, Education, Communication.
DFI Static Load Testing Video

- 24-minute tutorial video
- Published February 2017
- www.dfi.org/StaticLoadTesting
Post Grouting Workshop Report

• Report on Workshop on Quality Assurance for Post-Grouted Drilled Shafts
• October 2015
• State of the practice workshop
  • Design, construction, inspection, verification, acceptance criteria, reliability and performance of post-grouting
• Identify gaps and needs
• Free download at www.dfi.org
Soil Mixing Guidelines (2016)

- State of practice of Deep Mixing Methods (DMM) in North America
- Guide specification (in Word) for DMM
- Constructability and feasibility considerations
- Deep foundations and seepage control applications

- Guide specification and commentary format
- Word format
- Updates
  - QC/QA
  - Larger elements
  - Higher load carrying capacity
- Photographs and commentary
Best Practices for Slurry Support Fluids

- EFFC-DFI joint project
- Follow up to Tremie Concrete Project
- Free download from www.dfi.org
- Best practices for slurry support fluid handling and placement for drilled shafts and diaphragm walls
NAVFAC UFGS Specification Updates

- DFI Committees Reviewing
- Comprehensive, state-of-practice, unbiased
- Deep Foundations Techniques
  - Densified Aggregate Piers
  - Pressure Injected Footings
  - Tunnel and Shaft Grouting
  - Foundation Drilling and Grouting
  - Soil and Rock Anchors
  - Helical Piles
  - Auger Cast Grout Piles
  - Steel Pipe Piles
  - Timber Piles
  - Piling: Composite, Wood, CIP
  - Metal Sheet Piling
  - Precast/Prestressed Concrete Piles
  - Steel H Piles
  - Concrete Cylinder Piles
USACE-DFI Workshop
November 2016

- Improve specification language to reduce misunderstandings and disputes
- Cutoff wall contracts
- Contractors, engineers, and owners attended
- Report Due Spring 2017

Topics
- Design
- Cutoff Wall Materials
- QC/QA Testing
- Acceptance Criteria
- Long Term Performance
- Roles/Responsibilities of Design Engineer and Construction Manager
DFI Women in Deep Foundations Committee

- Chair: Helen Robinson (GEI Consultants)
- Networking and mentoring group – men and women
- Retention of women in deep foundations careers
- Five Professional Development Grants for 2017
  - Attendance at 42nd Annual Conference (New Orleans, October 24-27, 2017)
  - $1750 each + free full annual conference registration
  - Application deadline May 15, 2017
  - Please see www.dfitrust.org/Programs
- Networking events
  - SuperPile Networking Reception, Coronado Bay, CA June 2017
  - Nationals Baseball Game, Washington, DC August 2017
  - Reception – 42nd Annual Conference, New Orleans, October 2017
Committee Project Fund

• Funded $675,000 since inception in 2012
• In-kind contributions > $1,500,000
• Projects introduced and endorsed through DFI technical committees
• Benefits membership
• Practical, usable deliverables
• Next round of proposals due December 1, 2017
### 2017 Committee Project Fund Awards

<table>
<thead>
<tr>
<th>COMMITTEE</th>
<th>PROJECT</th>
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<tbody>
<tr>
<td>Seismic and Lateral Loads</td>
<td>Design recommendations for rock-socketed pile shafts for lateral loads when performing the check on &quot;minimum required length for lateral stability&quot;</td>
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<td>Landslides and Slope Stabilization Tiebacks and Soil Nailing</td>
<td>Develop consensus guidance for appropriate consideration of structural resistance</td>
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<tr>
<td>ACIP Piles</td>
<td>Monitoring installation of small scale DD piles to assess radial effect and extent of lateral stresses and displacements</td>
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<td>DFI of India</td>
<td>Implementation of CFA/ACIP Pile Technology in India</td>
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<tr>
<td>Helical Piles and Tiebacks Driven Piles Seismic and Lateral Loads</td>
<td>Pilot Experiment for Underpinning of Shallow Foundations on Soils Susceptible to liquefaction</td>
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Coronado Bay, CA

Keynotes

Osterberg Award Lecturer
- Dr. Rich Finno, P.E., D.GE, Northwestern University
- Lessons (Re)learned from Geotechnical Failures

Gerwick Award Lecturer
- Robert B. Bittner, P.E., Bittner-Shen Consulting Engineers, Inc.
- A Career Advancing the Technology of Deep Foundations
• Washington, DC
• Slope/Landslide Stabilization and Deep Excavation Support
• Now includes
  • Ground Improvement
  • Soil Mixing
  • Diaphragm Walls
• DFI Women in Deep Foundations Committee
  • Networking event at Nationals Baseball Game
• www.deepfoundations2017.org
• Focus on Risk as related to foundation practice
• Keynotes
  • Mosul Dam
  • Oroville Dam
  • Intersection of Engineering and Law
  • Engaging the Next Generation
• Committee meetings
• Bi-Monthly Magazine
• Bi-Annual Journal
• Committee guidance documents, manuals and white papers
• Conference and seminar proceedings
• www.OneMine.org
DFI Educational Trust
www.dfitrust.org

- Free Student Memberships
- School-Specific Scholarships
- At-large Scholarships
  - Deadline May 15, 2017
  - $2,000 to 5,000
DFI Staff

Theresa Engler, Executive Director
Mary Ellen Bruce Large, P.E., D.GE, Director of Technical Activities
Emilio Fandino, Director of Administrator
Maureen Mandel, Director of Programs
Lauren Nance, Senior Meetings and Events Specialist
Angie Gibble, Meetings and Events Specialist
Lorraine Engelma, Travel Coordinator
Karol Paltsios, Marketing Consultant
Alexandra Damon, Marketing Communications Manager
Shirin Madon, Membership Services Manager
Lisa Rayment, Bookkeeper
Damion Dolphy, Administrative Assistant/Shipping Services
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