SCOBS’ Prioritized Objectives

1. Extend bridge service life
2. Assess bridge condition
3. Maintain and enhance a knowledgeable workforce
4. Maintain and enhance the AASHTO specifications
5. Accelerate bridge delivery and construction
6. Optimize structural systems
7. Contribute to national policy
IBE Mission

Collaborate with stakeholders to identify and conduct research in requisite areas in order to provide developing engineers with the knowledge and skills necessary to ensure safe, reliable and hazard-resistant structures that are cost-effective and environmentally sustainable.

3-11-15 working draft
Advisory Board

• Harry Capers Jr., Arora and Associates PC, Chair
• Dan D’Angelo, NYSDOT
• Sheila Duwadi, FHWA
• Gregg Frederick, WYDOT
• Joey Hartmann, FHWA
• Mal Kerley, NXL
• Rick Land, Caltrans (ret.)
• Rich Marchione, NYSDOT
• Gregory Nault, Canadian National
• Darlene Svilokos, Watts Architecture & Engineering
Accomplishments to Date

1. Bridge courses developed and delivered with SCOBS involvement. Two new distance learning courses this semester.
2. $3.7M from Provost for new faculty and research
3. $15M (up to) IDIQ contract to provide support to FHWA Office of Bridges & Structures
New Faces

Kallol Sett  
Risk & Reliability

Pinar Okumus  
P/S Concrete

Anthony Tessari  
Foundations

Ravi Ranade  
Materials

Teng Wu  
Wind

Andreas Stavridis  
Seismic
Research

- Seismic protection systems
- Foundations
- NDE & SHM
- Wind engineering
- Engineered cementitious concrete (ECC)
- Risk and reliability
Education Emphasis

• EngiNet distance learning
• Real experience
• Introduction to bridge engineering course
  – 2 or 3 lectures from each faculty member
  – Broad spectrum of skills to be an effective bridge engineer
  – Leads to focused and advanced topics
## Sample Courses for M.S. Degree

<table>
<thead>
<tr>
<th>Topic</th>
<th>credits</th>
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</thead>
<tbody>
<tr>
<td>1. Emerging Technologies in Bridge Engineering</td>
<td>3</td>
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<tr>
<td>2. Prestressed Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td>3. Advanced Concrete Materials</td>
<td>3</td>
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<tr>
<td>4. Steel Structures</td>
<td>3</td>
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<tr>
<td>5. Deep Foundations</td>
<td>3</td>
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<tr>
<td>6. Structural Health Monitoring (SHM) &amp; Non-destructive Evaluation (NDE)</td>
<td>3</td>
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<tr>
<td>7. Asset Management &amp; Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>8. Seismic Isolation</td>
<td>3</td>
</tr>
<tr>
<td>9. Risk and Reliability</td>
<td>3</td>
</tr>
<tr>
<td>10. Engineering Project (or Thesis)</td>
<td>3</td>
</tr>
</tbody>
</table>
Students

• Internships
• Engineering projects
  – Load rating
  – Historic structures
  – D-B guidelines
  – Integral abutments
• Professional engagement
• Philanthropy
  – Bridging the Gap Africa
SCOBS Involvement

• Internships (e.g., unpaid at NYSDOT)
• Engineering projects
• Distance learners
• Speakers
• Input on needs:
  – Short courses
  – Webinars
  – Delivery methods
Bridge Engineering DVDs

- Distinguished speaker series with over 60 presentations
- $450/set