Geoengineer.org’s 2014 Resource Guide for Educators in Geotechnical Engineering

The International Information Center for Geoprofessionals

October 2014
Dear geo-educators,

Geoengineer.org has been developing resources to support geotechnical engineering education for the last 15 years. To promote awareness of these resources, we prepared this guide.

The guide provides a brief description of the available unique and entirely free educational online resources that you can use in educating students in geotechnical engineering and introduces a few additional resources that can allow you and your students to network with other students and professionals. Additionally, through CEECareers.com, students can search and find geotechnical jobs at no cost to them.

The resources that are listed in this year’s guide are an accumulation of contributions by many colleagues in the Profession. If you have any additional resources that you would be interested in sharing, please contact us.

We also like to acknowledge the generous support of ConeTec Inc. that made the publication of this guide possible.

On behalf of Geoengineer.org,

Vasiliki Dimitriadi, PhD, PE  Dimitrios Zekkos, PhD, PE
# Table of Contents

**Publications**

- Online Geoengineering Library .......................................................... 3
- Top 10 papers ................................................................................. 4

**News Center** .................................................................................. 5

**Multimedia** .................................................................................... 7

**Education**

- Ralph Peck Legacy site ................................................................. 8
- History of Geotechnical Engineering ................................................ 9

**Web-based Class Projects** .............................................................. 10

**Networking**

- GeoWorld ....................................................................................... 11

**CEECareers** .................................................................................. 12
Our free online geoengineering library, provides you and your students with unlimited access to more than 4,000 publications, papers, books, manuals, and theses, authored by more than 3,000 contributors!

All publications are classified in 32 different categories, covering the entire breadth of Geotechnical Engineering. You can browse through them, using the advanced search tool!

**Advanced Search**

<table>
<thead>
<tr>
<th>Category:</th>
<th>Select options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Filter: Enter keywords</td>
</tr>
<tr>
<td>Authors:</td>
<td>Check All/Uncheck All</td>
</tr>
<tr>
<td>Year:</td>
<td>Centrifuge Testing / Physical Modeling</td>
</tr>
<tr>
<td>Book Title or Journal:</td>
<td>Computational Geomechanics</td>
</tr>
<tr>
<td>Series:</td>
<td>Dams &amp; Embankments</td>
</tr>
<tr>
<td>Volume:</td>
<td>Deep Excavations</td>
</tr>
<tr>
<td>Number:</td>
<td>Discrete Element Modeling</td>
</tr>
<tr>
<td>Number of pages:</td>
<td>Engineering Geology</td>
</tr>
<tr>
<td>Description:</td>
<td>Environmental Geotechnics</td>
</tr>
<tr>
<td>Search using keywords:</td>
<td></td>
</tr>
</tbody>
</table>

This library is an outstanding place for your students to start their literature review immediately, without any cost!
Top 10 papers in...

Visit this unique section of Geoengineer.org to find a list of the top 10 papers on selected geotechnical engineering topics:

**Cone Penetration Testing**
by Prof. Paul Mayne

**Active Faulting**
by Robert H. Sydnor

**Embankment Dams**
by Dr. David Rees Gillette

... and many more!

Each list has been developed by distinguished members of the academic and professional community!

- Use the top 10 paper section as a starting point for your literature survey!
- Introduce your students to new fields of the Geo-profession
- Challenge them to combine this information into a class project!

Recommend the best 10 papers in a specific field of your expertise & contribute to the expansion of this unique database!
Daily News Items

Stay up to date with the latest news in geotechnical engineering, as published daily by our team of geotechnical engineers!

News items on:
- Significant geotechnical projects
- Failures of geotechnical structures
- Events (conferences, seminars, webinars and more)
- Natural disasters (earthquakes, landslides, floods)

... are posted **daily** in the [News Center Home](#).

Technical content is collected from different sources, fully indexed, and accompanied by **photos** and **videos**!

**Selected latest news items are displayed on Geoengineer.org’s main page daily so have your students check it out during the semester!**
Examples of published news items include:

- The *Oso landslide* (published on 3/24/2014)

![Oso landslide image]

- The *All-Alaskan pipeline project* (published on 3/10/2014)

![All-Alaskan pipeline image]

- *Tilting building in Korea* (published on 5/19/2014)

![Tilting building image]

- *8 new U.S. tunnels underway: fascinating and challenging* (published on 1/10/2014)

![Tunnel image]

Forwarding breaking news in major media channels that relate to geotechnical engineering is a great way to excite students about our field! Our news center collects these for you!
For your use in presentations and homeworks, we have created the **largest online collection of 780+ photos** in geotechnical engineering & engineering geology that will attract your students’ attention!

For your first class homework, **as extra credit assignment**, engage your students by asking them to browse the gallery, print their favorite photo and tell you why they like it! Click [here](#) for an example!

All geo-photos are in high resolution and fully indexed, including:

- A short description
- Location of the photo
- The photographer's name
- The date that the photo was taken

Submit your photos and help us expand!
Ralph Peck Legacy site

A website dedicated to the personal and professional life of Professor Ralph Peck, a legendary figure of our Profession.

Learn about his life:
- Biography
- Curriculum Vitae
- Awards
- Citations
- Accomplishments
- PhD students

See the complete list of his Publications

Available Resources
- Interviews
- Photos
- Videos
- Peck’s Words of Wisdom
- Presentations
- Testimonies

Among the numerous site resources, you can find Prof. Peck’s video on Engineering Judgment, a MUST-SEE for all civil engineering students

“Engineering is indeed a noble sport, and the legacy of good engineers is a better physical world for those who follow them”

Ralph Peck

Created in collaboration with Mrs. Nancy Peck-Young, daughter of Professor Ralph Peck and sponsored by the Shamsher Prakash Foundation.
History of Geotechnical Engineering

A wide collection of resources related to the evolution of geotechnical engineering throughout the years, starting from pre-historic times, up to the 18th century!

Karl Terzaghi’s legacy in geotechnical engineering.
Goodman, R. D., Geostrata Magazine, 2002

Pile boring Machines of the 18th Century
Encyclopedia Britannica (3rd edition) published during 1797-1803

Geotechnical Engineering Practice in the Mycenaen Civilization (1600-1100 BC)

and many more!

In the In Memoriam Announcements section, students can learn about the life and work of important figures of the Geo-profession, among which are:

The Rankine Lecturer
Nilmar Janbu
(1921-2013)

The "O-Cell" inventor
Jorj O. Osterberg
(1915-2008)

The earthquake expert
Robert V. Whitman
(1928-2012)

Father of geotechnical earthquake engineering
Harry B. Seed
(1922 - 1989)
Web-based Class Projects

Open your classroom to the entire geotechnical professional community!

✓ Use this web platform and motivate students to develop entire projects online with:

- Text
- Photos
- Videos

✓ Review projects electronically

✓ Invite professionals to review, provide comments, edits and other feedback. Students love to receive feedback from professionals!

✓ Engage your students to answer comments from visitors!

See examples of online projects implemented at the University of Michigan, or read an article about it:

Geoenvironmental Remediation Technologies, Winter 2013 semester

Selected Topics in Ground Improvement, Winter 2014 semester

Student assessment studies show that students prefer a web-based project compared to an in-classroom only project and learn more, are more enthusiastic, and do a better quality project.
**GeoWorld** is a free online networking tool developed by ISSMGE and Geoengineer.org with the mission to promote professional networking among geotechnical engineers, companies and organizations.

GeoWorld is a great tool to demonstrate to geo-students how large and exciting the geotechnical engineering profession is. With a FREE GeoWorld account, students can:

- **Create a professional profile** that can increase their outreach to the geotechnical community
- **Connect with a continuously expanding network of geo-professionals**, measuring so far 3,800+ members!
- Follow the **news of geo-professionals**
- **Participate in the technical forums** and find **conferences**!
Use the free search tool for jobs in CIVIL, ENVIRONMENTAL & CONSTRUCTION INDUSTRY!

Students can register for FREE and start looking for geotechnical engineering jobs all over the world!

CEEcareers.com was designed with the Mission to:

- Simplify the process
- Maximize the impact
- Minimize the cost of recruiting professionals
We also thank our Geoengineer.org 2014 corporate sponsors: