

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



*The International Information
Center for Geoprofessionals*

October 2014

About this Guide for Educators in Geotechnical Engineering

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

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Online Geoengineering Library

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

Category:

Title:

Authors:

Year:

Book Title or Journal:

Series:

Volume:

Number:

Number of pages:

Description:

Search using keywords:

Select options

Filter:

☒ Check All ☒ Uncheck All

☐ Centrifuge Testing / Physical Modeling

☐ Computational Geomechanics

☐ Dams & Embankments

☐ Deep Excavations

☐ Discrete Element Modeling

☐ Engineering Geology

☐ Enviromental Geotechnics

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:



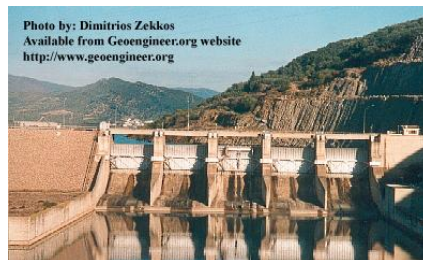
Cone Penetration Testing

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!

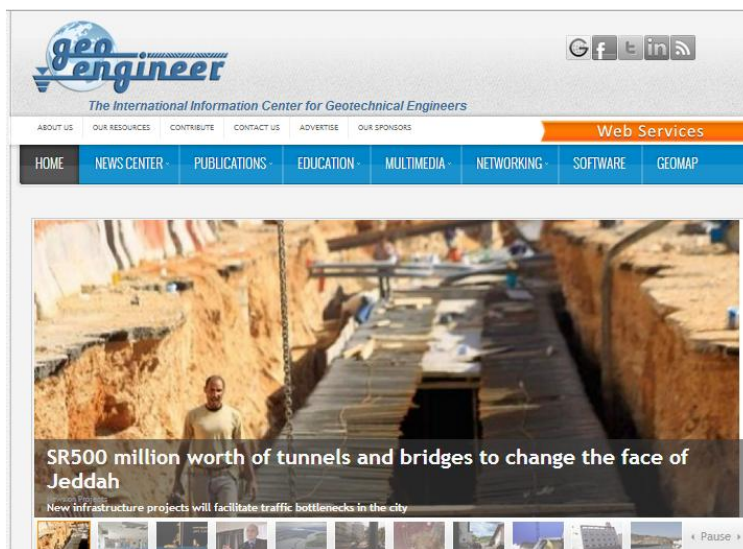
News items on:

- 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!





Daily News Items

Examples of published news items include:

- The [Oso landslide](#) (published on 3/24/2014)



- The [All-Alaskan pipeline project](#) (published on 3/10/2014)



- [Tilting building in Korea](#) (published on 5/19/2014)



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!

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





Photo gallery

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!



Album: Roads and Highways



Album: Tunneling

Submit your photos and help us expand!



Album: Retaining Walls and Slope Stability



Album: Engineering Geology

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!*



Album: Landslides



Album: Geoenvironmental Engineering



Album: Ground Improvement



Album: Bridges



Album: Levees/Embankments

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



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](#)
- [Videos](#)
- [Presentations](#)
- [Photos](#)
- [Peck's Words of Wisdom](#)
- [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](#).



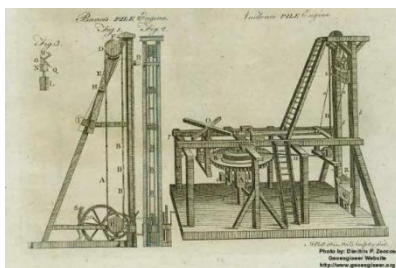
History of Geotechnical Engineering

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 \(1600-1100 BC\)](#)

Zekkos, D., Manousakis, J., Athanasopoulos, A. (2005), 2nd International Conference "Ancient Greek Technology", Athens, Greece.

and many more!

VISIT
WEBSITE

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
[Jori 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 a in-classroom only project and learn more, are more enthusiastic, and do a better quality project.





GeoWorld

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.**

All GeoWorld members (individuals, companies and organizations) are displayed on **GeoMap!**



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** !





CEECareers.com

CEECareers

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



Reference: Dimitriadi V., and Zekkos D., (2014), "Geoengineer.org's 2014 Resource Guide for Educators in Geotechnical Engineering." Geoengineer.org Report GEO-2014-01, October 2014.

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We investigate conditions below the earth.

CONE TEC

Geotechnical Services

- Cone Penetration Testing
- Drilling and Sampling
- Strength Testing
- Geophysical Testing
- Instrumentation
- Pond Bathymetry
- Cloud Based Data Management

Sectors Served

- Infrastructure
- Power Generation
- Property Development
- Transportation
- Ports & Harbours
- Environmental
- Mining



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