

The Official

AEG OREGON CHAPTER NEWSLETTER

<http://www.aegoregon.org>

<u>MEETING DETAILS</u>	
February 2020	
Date:	Tuesday, Feb 18, 2020
<u>Location:</u> Old Market Pub 6959 SW Multnomah Blvd Portland, OR 97223	
<u>Evening Agenda:</u> 6:00 pm Social Hour 6:45 pm Dinner 7:30 pm Presentation	
<u>Reservations:</u> https://aeg-or-2020-02.brownpapertickets.com \$25 Private Industry \$20 Public Agencies Students: Free	
<u>Deadline:</u> 12 noon Monday, Feb 17, 2020	

Advances in Rockfall Protection: A Preliminary Design Tool for Attenuators

Speaker: Tim Shevlin, P.G.

Attenuators are a passive rockfall protection solution sometimes described as a flexible rockfall barrier with a prolonged draped tail. To date there is no formal solutions to their design. In comparison to classical flexible rockfall barriers where only translational kinetic energy is considered and the rockfall is stopped completely;

attenuators present a design challenge wherein both the rotational and translational component of rockfall must be considered. In addition, Attenuator Systems are not stopping the rockfall, rather changing the trajectory and moderating the velocity. In order to develop a dimensioning concept that addresses these dynamics, it is important to fully understand the attenuation process. A joint research program between Wyllie & Norrish Rock Engineers, Ltd. in Canada, Geobrugg North America, LLC, and Geobrugg AG, Switzerland investigated this process. The loading of the system, the attenuation processes and the importance of the rotational component have been analyzed in full-scale testing over a three-year period, on a site in British Columbia. This contribution provides insights into the analysis of the loading mechanisms acting on the attenuator system during rockfall impact. Rock motion dynamics are compared between those extracted from the accelerometer and gyroscope sensors embedded in the test blocks, high speed video analysis and rockfall simulations. These analyses provide the foundations with which a dimensioning tool has been created.

Biography:

Tim Shevlin is an Engineering Geologist with over 15 years of experience performing geotechnical and geologic investigations. Mr. Shevlin has a Bachelor of Science in Environmental Science from Allegheny College and a Master of Science in Geology from Kent State University. He is also a licensed Professional Geologist in the State of Pennsylvania and Oregon.

Prior to joining the Geobrugg team Tim worked on both public and private sector projects for nationally-known engineering consulting firms performing geotechnical investigations and designs. He has experience working on commercial development projects, water resource projects, and transportation/railroad projects.

BEVERAGES SPONSORED
BY GEOBRUGG!

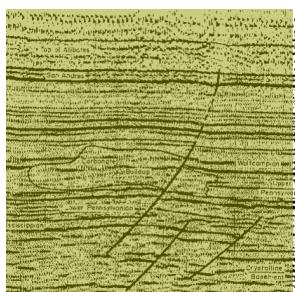
UPCOMING MEETINGS:

Mar 17th Jahns Lecturer
- Lucky Lab - Quimby
1945 NW Quimby St.
Portland OR 97209

Apr 21st TBD
(Share your knowledge)

May 19th Student Poster Night





Biography Continued...

Tim is Geobrugg's Regional Manager for Northwest USA & Hawaii and the Technical Director of Sales and Marketing; he works out of Salem, Oregon.

Geobrugg North America, LLC: Protecting people and infrastructure from Natural Hazards

Message from the Chair

Hello Oregon Chapter! We are full speed ahead with the new year and what an exciting year it is going to be with the Annual Meeting being held in Portland. I unfortunately was not able to make it to the joint ASCE meeting on January 8th, but I understand there was over 100 people in attendance. Thanks to those that supported our chapter. Thanks to Max Gummer and Stuart Albright for braving the crowds for a presentation on ODOT's current Geotechnical Engineering and Engineering Geology Disciplines.

We're looking forward to the February meeting. Tim Shevlin who is the Technical Director of Sales and Marketing and Regional Manager of Pacific NW and Hawaii for GeoBrugg North America will be presenting on Advances in Rockfall Protection: A Preliminary Design Tool for Attenuators. There will also be free beverages provided by GeoBrugg, so please join us on February 18th for some socializing and an interesting talk.

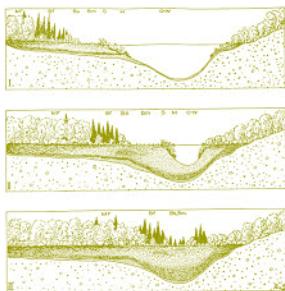
Exciting news from AEG National, there is a reworked website (www.aegweb.org). The site is friendlier to navigate and has some great resources. Take a moment to peruse the content and see how it can help you with your career or search for that first job opportunity.

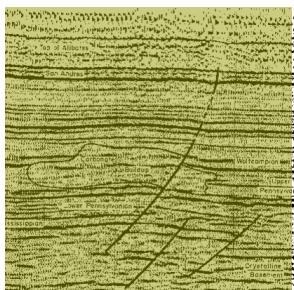
As we dig deeper into the new year it is great to start with a clean slate. Please take a moment to renew your membership for 2020. Our memberships help support the Chapter and keep the national organization vibrant. As always your support of the Chapter and AEG is appreciated.

Lastly, the Annual Meeting is open for registration and accepting abstracts. If you have a good project or a presentation, then find your way to aegannualmeeting.org and submit an abstract. It would be great to have a strong local presence at the meeting.

Looking forward to seeing you at the meeting!

Ben George
Oregon AEG Chapter Chair





Portland 2020 Annual Meeting

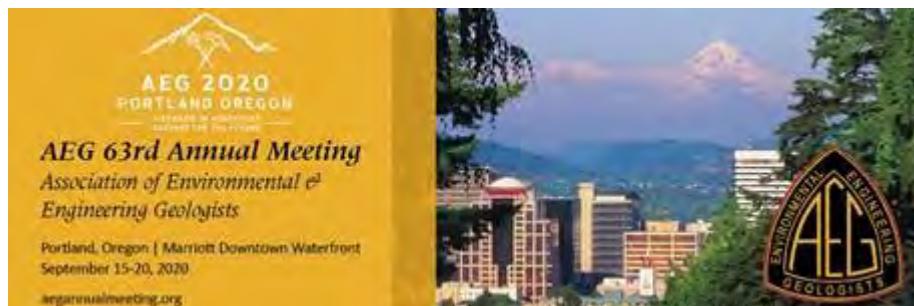
Abstracts and Registration is now open! Head to aegannualmeeting.org to sign up!

Furthermore, consider nominating an AEG volunteer for the **Doug Piteau Award**. This award is for an outstanding volunteer under the age of 35. The level of volunteer activity can be at either the Chapter or Association level. This award was not given last year, because we received no nominations. Please consider nominating this year, so that we can acknowledge and show appreciation to our younger members in AEG.

Nominations are due March 1st to manager@aegweb.org.

“Keen observation is at least as necessary as penetrating analysis”

Karl Terzaghi



Student Chapter News:

The Portland State University (PSU) AEG Student Chapter is looking for speakers for their Career Info Session Thursday February 27th! (See details below) If you are an actively working environmental geologist, engineering geologist, or work for a government agency they would like it if you would share your knowledge with the next generation during the career session. Ideally they would hear from someone from each discipline. Please think about volunteering your time so we can help students move forward with their careers as they move out of academia.

If interested, please contact [Stephanie Welch](mailto:Stephanie.Welch@pdx.edu) at sw22@pdx.edu and add “Career Info Session” in the subject line.

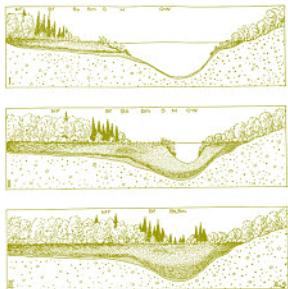
Career Info Session Details:

PSU Geology Department:

Thursday February 27th (3pm to 5pm)

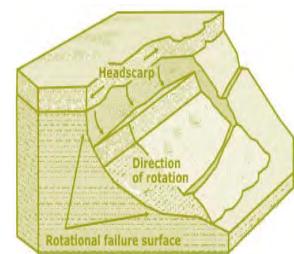
3:00pm-3:45pm – Social Hour (Food and Beverages)

3:45pm-5:00pm – 15 min Guest speakers (**This could be you!**)



"The earth is large and old enough to teach us modesty."

Hans Cloos



TECCO® SYSTEM³ – Your slopes made stable

- TECCO® SYSTEM³ can be optimized depending on the subsoil with several mesh types
- meshes made of 2 mm, 3 mm and 4 mm diameter high-tensile steel wire
- optimization of anchor spacing thanks to two new spike plate sizes
- RUVOLOM® dimensioning software based on large-scale field and model tests
- small CO₂ footprint and option to cover with natural vegetation



Scan and watch our movie on
[www.geobrugg.com/youtube/
TECCO-fullscale](http://www.geobrugg.com/youtube/TECCO-fullscale)



Geobrugg North America, LLC
Tim Shevlin, PG • Northwestern USA
Phone (503) 423-7258 • Fax (505) 771-4081
tim.shevlin@geobrugg.com
www.geobrugg.com



GEOPHYSICAL SURVEYING
for environmental
and geotechnical
applications



503.501.7846
nikos@pacificgeophysics.com
www.pacificgeophysics.com



HOLT SERVICES INC

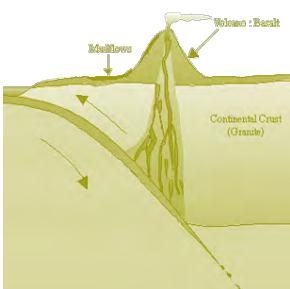


**Your Environmental,
Geotechnical
& Clean Water
Professionals**

360-771-7586

info@holtservicesinc.com

www.holtservicesinc.com



We engineer success stories.

PBS is a trusted source of practical, sustainable solutions to the region's environmental and engineering challenges—enabling projects to succeed and communities to thrive.

PBSUSA.COM

**Quality People
Quality Results**

37 years in the Northwest



ENVIRONMENTAL SERVICES • HEALTH & SAFETY
SURVEY • GEOTECHNICAL ENGINEERING
STRUCTURAL ENGINEERING • CIVIL ENGINEERING



Providing Quality
Geophysical Services
since 1984

EARTH DYNAMICS LLC

2284 NW. Thurman St.
Portland, OR 97210
(503) 227-7659
info@earthdyn.com

www.earthdyn.com

Engineering Geophysics:

- Seismic Refraction/Reflection
- Shearwave Velocity Studies
- Electrical Resistivity Profiling
- Ground Penetrating Radar
- Magnetics/Electromagnetics
- Gravity
- Marine Geophysics

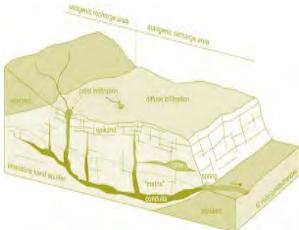
Vibration & Noise Analysis:

- Remote Vibration Monitoring
- Real-time Frequency Analysis
- Construction Monitoring
- Demolition Monitoring
- Blast Design and Monitoring
- Pre-construction Surveys
- Sensitive Equipment Certification

Rock Mechanics:

- Uniaxial Compressive Strength
- Direct and Triaxial Shear Strength
- Direct and Indirect Tensile Strength
- Dynamic & Static Elastic Moduli
- Thermal Properties
- Density & Porosity
- Moisture Content





EARTH **WATER**

Geotechnical Engineering
Environmental Remediation
Water Resources
Stormwater
Data + Mapping

Bainbridge Island
Bellingham
Bend
Portland
Seattle
Wenatchee
Yakima

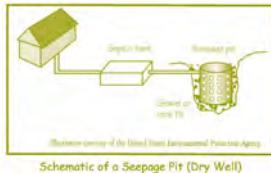
Aspect
CONSULTING
www.aspectconsulting.com
971.865.5890



ROCKS **HI-TECH ROCKFALL CONSTRUCTION INC.**

HI-TECH Rockfall is a General Contractor that specializes in Rockfall Mitigation and has been the industry leader for over 18 years. Our Highly Trained & Skilled Employees provide us the Highest Safety Record in the Industry.

We Service Multiple Industries which include:
Government & Military **Highways**
Mines & Quarries **Railroads**
Commercial & Residential **Utilities**



Products and Services include:

Highwall Stabilization

Wire Mesh Drapery

Rock Scaling

Rock Bolts

Rock Dowels

Shotcrete

Rockfall Barriers

Avalanche Nets

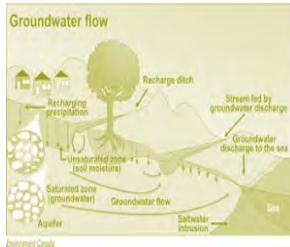
Instrumentation Installation

Rope Access Work

HI-TECH Rockfall Construction, Inc.
P.O. Box 674, Forest Grove, OR 97116

Office: (503) 357-6508
www.hitechrockfall.com





SYSTEMS

- Drilled and Grouted Tie-Back Anchors
- Light Weight Fills: Foam & Cellular Concrete
- Geotechnical Drilling Explorations
- Shoring (temporary & permanent)
- Drainage, Including Horizontal
- Helical Anchors & Piles
- Drilled Shafts (caissons)
- Limited Access Drilling
- Landslide Stabilization

**SOIL and FOUNDATION
STABILIZATION SOLUTIONS
GEOTECHNICAL EXPLORATIONS**

in OREGON and WASHINGTON

503.649.8111 info@plisystems.com

- Elevator Jack Shafts
- Displacement Piles
- Wall Construction
- Sheet Pile Walls
- Injection Boring
- Underpinning
- Rock Anchors
- Rock Coring
- Dewatering
- Pile Driving
- Micropiles
- Shotcrete
- Soil Nails
- Grouting
- Pin Piles
- SPT



"A soil adapted to the growth of plants, is necessarily prepared and carefully preserved; and, in the necessary waste of land which is inhabited, the foundation is laid for future continents, in order to support the system of the living world.."

James Hutton

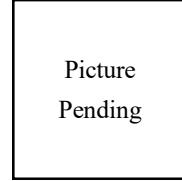
Chapter Officers & Committee Chairs



Chair:
Benjamin George
Cornforth Consultants, Inc.
bgeorge@ccilt.com



Program Chair:
Jasmin Jamal
Aspect Consulting
jjamal@aspectconsulting.com



Legislature Chair:
Volunteer Needed
This could be you!



Field-Trip Chair:
Erin Dunbar
Geosyntec Consultants, Inc.
dunbar.erin@gmail.com

Newsletter Editor:
Bryon Free
Oregon Department of Transportation
Bryonfree@gmail.com



Chair-Elect:
Michael Marshall
GRI
mmarshall@gri.com



Field-Trip Chair:
Erin Dunbar
Geosyntec Consultants, Inc.
dunbar.erin@gmail.com



Webpage Editor:
Matt Randall
PBS Engineering and Environmental
matt.randall@pbsusa.com



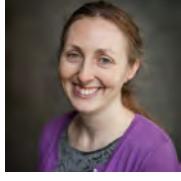
Treasurer:
Nancy Calhoun
DOGAMI
nancy.calhoun@oregon.gov



Membership Chair:
Ruth Wilmot
Columbia Geotechnical, Inc.
ruthwilmot@comcast.net



PSU Student Chapter President:
Stephanie Welch
Portland State University
sw22@pdx.edu



Secretary:
Aine Mines,
Cornforth Consultants , Inc.
amines@cornforthconsultants.com



Past-Chair:
Chris Humphrey
FERC
geohumphrey@yahoo.com

**The Oregon Chapter is also on
the web at
<http://www.aegoregon.org>**

**National AEG webpage:
<http://aegweb.org>**

Subscribe to the newsletter by sending any e-mail to

aegoregon-subscribe@groups.electricmembers.net

Thanks For Supporting AEG

Members, Volunteers, Aspect Consulting, Columbia Geotechnical, Cornforth Consultants Inc., DOGAMI, Earth Dynamics LLC., Federal Energy Regulatory Commission (FERC), Geobrugg, GRI, Hi-Tech Rockfall, Holt Drilling, NACSE, ODOT, Oregon State University, Pacific Geophysics, PBS Engineering & Environmental, PLI Systems, Portland State University, Western Oregon University

The AEG Oregon Chapter Newsletter

The Association of Engineering Geologists (AEG) contributes to its members' professional success and the public welfare by providing leadership, advocacy, and applied research in environmental and engineering geology. AEG's values are based on the belief that its members have a responsibility to assume stewardship over their fields of expertise. AEG is the acknowledged international leader in environmental and engineering geology, and is greatly respected for its stewardship of the profession.

AEG OREGON CHAPTER NEWSLETTER is published monthly from September through May. Subscriptions are for members of AEG affiliated with the Oregon Chapter or other Chapters, and other interested people who have requested and paid a local subscription fee of \$10.00. E-mail subscriptions are free. News items are invited and should be sent to: Ben George, AEG Oregon Chapter Chair-Elect, Cornforth Consultants, Inc., 10250 SW Greenburg Road, Suite 111, Portland, OR 97223, e-mail: bgeorge@ccilt.com, phone (503) 452-1100. Electronic media is preferred. Deadline for submittal is the 25th of the month. Advertising: business card size \$100/yr; 1/4 page \$200/yr; 1/2 page \$350/yr; 1 page \$450/yr.

