



# Buffalo Association of Professional Geologists GEOGRAM

## In this issue

March Virtual Meeting Info **P.2**

Calendar of Events **P.3**

News / Announcements **P.6**

NYSCPG Continuing Education **P.6**



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## Message from the President

I hope this message finds you well and with positive thoughts of a warm spring to come. It's been a few months since our last Geogram. Apologies for that, but with the pandemic and several other things that have been going on, it just hasn't been possible to pull something together in a timely way. However, we do have some exciting things going on. First, I'd like to offer my thanks to Andy Klettke and ASCE for hosting, and to speaker Joshua Repp for presenting, our joint webinar in February about the Red House Lake dam and bridge construction. I always enjoy these joint sessions because I learn something new about what our engineering colleagues are working on.



*Continued on page 3...*

### **BAPG March Virtual Meeting Wednesday March 17, 2021 12:00—1:00 p.m.**

**"Extracting more from your data – Quantitative Optimization of Remedial Design Delineation through 3D Geostatistical Modeling"**

**Presenters:** James (Jim) Schuetz, P.G (Parsons)  
Melanie Beck (Parsons)

**Date:** Wednesday, March 24, 2021

**Time:** 12:00—1:00 pm

**Place:** Virtual webinar (link to be provided after registration)

**PDH Approval for NYS Professional Engineers Pending**

[\*\*Register Here\*\*](#)

*See Next Page for Details...*

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## BAPG March Virtual Meeting

### Quantitative Optimization of Remedial Design Delineation through 3D Geostatistical Modeling

Presented By: Jim Schuetz, P.G (Parsons) and Melanie Beck (Parsons)

#### Presentation Description

##### Background/Objectives:

The word "model" has a wide range of use and perceived definitions, ranging from a general depiction of the subsurface to highly involved numerical finite difference algorithms. The first part of this presentation is to discuss differences in the variety of environmental models, in order to enhance collective technical competence, project execution, and innovation. From this context the discussion will expand into project examples of groundwater modeling and innovative ways in which advanced mathematical algorithms support a variety of remedial design optimizations.

##### Approach/Activities:

There are a multitude of software solutions and techniques for analyzing data in the highly complicated field of groundwater and environmental consulting. These include but are not limited to statistical analyses, visual representations, geospatial analysis, and mathematical algorithms. There are particular differences in models based on physical law and/or empirical relationships compared to non-physically based models. Often, a project team or client sets forth a mission to "model" a site with a defined objective in mind, but without an understanding of the highly varied field of "modeling." This presentation defines and explains a variety of mathematical models to help practitioners, technical teams, and project managers make decisions on how to best analyze and represent site data. Fundamentals to the process are clearly explained with focus on geostatistical analyses.

Applying various geostatistical models to site examples is demonstrated, to present how a variety of geostatistical and 3D visualization tools can improve remedial design systems and/or advance site progression.

##### Results/Lessons learned:

The presentation provides a thorough discussion regarding the use of geostatistical models with site examples to reduce uncertainty and limit the time and expense of over sampling.

#### Speakers' Bios

Mr. Jim Schuetz is a Principal Hydrogeologist and Technical Manager with Parsons specializing in groundwater modeling, bioremediation, advanced 4D visualization modeling, geostatistics and complicated geological environments. His extensive knowledge of field applications, numerical / analytical expertise, and fundamental geologic knowledge provides a unique skill set. Jim has been with Parsons for 19 years. Prior to joining Parsons, his master's degree work involved 3-D numerical groundwater flow modeling, and he worked as an exploration geologist in Greenland and Africa.

Ms. Melanie Beck is a Hydrogeologist with Parsons specializing in analytical and numerical groundwater modeling, advanced mathematical analyses, and geostatistics. Prior to joining Parsons, Melanie worked as a hydrogeologist for Ecology and Environment Inc., and has four years of project experience. Her master's degree work involved 2-D groundwater finite difference modeling of groundwater-surface water interactions.

#### Virtual Presentation

**Date:** Wednesday, March 24, 2021  
**Time:** 12:00—1:00 pm  
**Place:** Virtual webinar (link to be provided after registration)  
**Cost:** Free!

[Register Here](#)

*PDH Approval for NYS Professional Engineers Pending*

For reservations, please visit our website at [BAPG.org](http://BAPG.org) and click **Events**. You can also email [VicePresident@bapg.org](mailto:VicePresident@bapg.org).

Payments are accepted online under event registration or make checks payable to "BAPG" and bring with you to event. If you have registered but cannot make it please notify the [Vice President](#) immediately as BAPG is responsible for all no shows.

## Message from the President *continued from page 1*

In March, we'll be hearing from our own Treasurer, Jim Schuetz, and his colleague at Parsons, Melanie Beck, who will give us a presentation on Geostatistics and it's applications.

In April, we are planning another Student Scholarship event. Details are forthcoming, but we expect it to be an online event similar to what we did in May 2020, with brief student presentations in a Zoom-like format followed by Q&A and finally voting and awards.

BAPG is also currently working with the local chapter of AWMA (Air & Waste Management Association) to cosponsor AWMA's annual professional enrichment seminar. The event will be virtual and hosted by a professional online event firm over two days, May 25—26, 2021. If you are interested in helping with planning or during the event, have ideas for presentations or want to present a topic of your own, please contact [president@bapg.org](mailto:president@bapg.org).

Be safe and well,

Rick Watt, P.G.

## Calendar of Events

Date	Event	Location	The Scoop
March 17, 12:00 p.m.	BAPG Webinar	Virtual event	<a href="https://bapg.org/event-4197933">https://bapg.org/event-4197933</a>
March 7-13, 2021	National Groundwater Awareness Week	NGWA	<a href="#">Click here for info</a>
April (date TBD)	BAPG Webinar	Virtual event	Student Scholarship Presentations
April 22-25, 2021	BGS Cincinnati Trip	Cincinnati, OH	<a href="https://bgsny.org/">https://bgsny.org/</a>
May 25-26, 2021	AWMA/BAPG Enrichment Seminar	Virtual event	Eight presenters over two days plus social opportunities
March 19-20, 2022	Buffalo Geological Society Gem Mineral and Fossil Show	Hamburg Fair Grounds	2021 event canceled; Contact Jerry Bastedo at 716-864-2701 to sign up for 2022

### **BAPG MISSION STATEMENT**

The **Buffalo Association of Professional Geologists (BAPG)** was founded in 1985 to strengthen and advance the geological sciences; provide an open forum for the exchange of ideas; foster the spirit of scientific research; disseminate information related to the geological sciences; and uphold the highest standards of professional conduct and ethics of geoscience professionals.

The BAPG conducts regular membership meetings on the third Wednesday of the month, January through June and September through November, featuring distinguished speakers whose presentations invite comment and discussion. Field trips and technical seminars sponsored by the BAPG encourage the exchange of scholarship and expertise. Inquiries regarding membership, publications or activities may be directed to:

**Buffalo Association of Professional Geologists P.O. Box 179      Bowmansville, New York 14026-0179**

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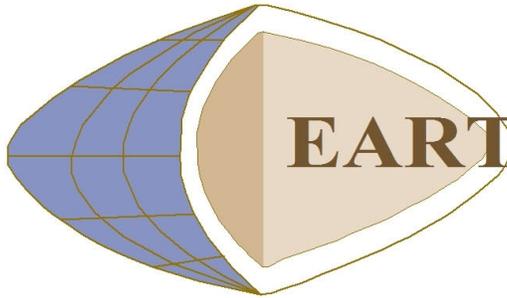
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## In other news...

### NFS-AWMA SCHOLARSHIPS and EARTH DAY GRANTS

The A&WMA-NFS is now accepting Earth Day Grants. Applications are due by March 26, 2021. Click [here](#) for more information and application forms.

The A&WMA-NFS is now accepting applications for high school seniors and college students who will be attending a college or university in 2021-2022. Applications for high school seniors can be found [here](#) and for college students can be found [here](#). Both are due by April 9, 2021.

### HMPGA Field Camp Scholarships

HMPGA is giving out up to two \$500 dollar scholarships for field camp to geology students in New York State. HMPGA is looking for students (graduate or undergraduate) and encourages anyone to apply who is considering field camp this year. Information and application form are available at [hmpga.net](http://hmpga.net).

## An Update on Continuing Education for Professional Geologists in New York State

April 1, 2021

12- 1 PM

Free webinar presented by NYSCPG and Alpha Analytical



Featuring:

Peter B. McConnell, Esq.

James J. Janora, PG

Mark Williams, PG  
(Moderator)



**Register Now**