



# PRESERVATION ENGINEERING TECHNICAL COMMITTEE

APT PETC NEWS

February 2021

Dear PETC Members,

Many thanks to all of you who have been supportive and involved through the years in helping to grow the APT Preservation Engineering Technical Committee (PETC). We are always looking for new volunteers to help us maintain and continue to grow the programs that we spearhead. We are especially looking for people to volunteer with the DRI and the new Preservation Engineering Mentorship program.

We try to keep the PETC website [www.apti.org/preservation-engineering](http://www.apti.org/preservation-engineering) updated with current information so you can check it out often. We urge anyone who would like to be more involved to reach out to any of the co-chairs or email us at [petc@apti.org](mailto:petc@apti.org).

PETC Co-Chairs – [Sarah Gray](#), [Rachel Will](#), [Amy Woods](#)

## David Fischetti Award

Each year, PETC presents the David Fischetti Award for an outstanding article that advances the field of preservation/conservation engineering.

Articles may be project related, or based on research and cover any of the following topics:

- History of engineering design, methods, or systems (structural, building enclosure, mechanical, electrical, fire protection, vertical transportation, etc.)
- Application of analytic methods with proper judgement to analyze archaic systems
- Re-evaluation and comparative analyses of historic analytic methods
- Assessment of historic materials and systems
- Integration of modern systems with historic and archaic systems
- Innovative methods of repair of historic systems
- Incorporation of engineering judgment and simplified methods



Deadline for submission is **Friday May 28, 2021**.

The 2020 David Fischetti Award recipient was Mr. Tom Nehil, PE, for his article “Determining Design Stresses from Strength Values” that was published in Timber Framing, the Journal of the Timber Framers Guild, Number 127, March 2018.

For more details and links to past award recipients please [click here](#).

## Student Design-Build Competition

PETC congratulates the University of Nebraska for winning the 2020 Student Design-Build Competition during the Edmonton virtual conference. Photos of their Timber Bridge and other photos of the other team finalists can be found by [clicking here](#).

PETC is planning for an exciting Student Design-Build Competition to be held at this fall's APT Conference in Washington, D.C. The competition theme will be the Masonry Arch. For information and the specification for this year's competition, please [click here](#). If you have direct contacts with students and/or post-secondary schools, please send them [this link](#) so they can express interest in the competition and receive this year's competition specification directly from the PETC competition committee.



Key Student Competition dates:

- February 28th: Phase 1 deadline for student teams to submit their Notice of Participation and Arch Selection to PETC. In early March, the committee notifies teams that will move to Phase 2.
- May 15th: Teams submit their Phase 2 reports and videos for their Arch Design-Build to PETC. The committee will score the submittals to select up to 5 teams that will move the Finals.
- Summer 2021: Finalist teams plan and prepare for the Phase 3 competition.
- October 27-November 2: Phase 3 competition finals during the APT Annual Conference in Washington, D.C. (exact dates to be determined).

PETC thanks our many volunteers who are busy planning the competition activities! As we continue to plan, PETC requests the following additional volunteers from our membership:

- Mentors – We would like to assign at least one preservation practitioner to each of the teams selected to participate in Phase 2 of the competition. Mentors will help support teams by answering student questions and offering advice regarding historic masonry research as well as the design, build, and testing of a structural masonry arch at each team's home campus. We would like to have the mentors in place by early March when the teams begin Phase 2. If you are interested in being a team mentor, please email us at [petc@apti.org](mailto:petc@apti.org). We are currently looking for mentors for the following schools:

- *Willowbank*
- *Otago Polytechnic*
- *Auburn University*
- *Columbia University*
- *University of Bologna*
- *Newcastle University*
- *Columbia University*
- *Cal Poly, San Luis Obispo*
- *University of Calgary*
- *Bucknell University*
- *Case Western Reserve University*
- *University of Calgary*
- *University of British Columbia- Okanagan*
- *University of Calgary*
- *Temple University*
- *University of Maryland, College Park*

- Temple University
- University of Illinois at Urbana-Champaign
- University of California, Berkeley
- University of Notre Dame
- University of Ottawa
- The University of British Columbia

- Judges – We are looking for judges to participate in the 2021 Competition Finals during the APT Annual Conference. Responsibilities include reviewing all the final student reports, watching videos of the student teams building their on-campus arches, and attending the conference to judge the final student presentations, the dry stack arch competition, and the Preservation Problems addressed by each team. If you are interested in being a judge, please email us at [petc@apti.org](mailto:petc@apti.org).
- Sponsors – Please consider becoming a sponsor to the PETC Student Design Competition, which helps us to make sure these student teams are funded. For Sponsorship information [click here](#) or donate directly on the [APT Donation Form](#) (make sure to check the box “PETC Student Design Competition”).

### Preservation Engineering Mentorship Program

APT PETC is starting a preservation engineering mentorship program in 2021. The goal is to provide a forum for young professionals to get connected, have a place to ask their questions, gain additional experience, and network with professionals in the preservation engineering field. We will hold a few virtual events prior to the 2021’s APT Conference in Washington, D.C. PETC will coordinate a social/networking event at the conference for all mentors and mentees in attendance to have an opportunity together and network. We will plan on having an informational kick-off session for anyone interested on **Thursday March 18, 2021 at 12:00 PM Central Standard Time (CST)**. Please register for the zoom meeting [here](#). Agenda to follow at a later date for registrants of the meeting.

If you are interested in becoming a mentor or having a mentor, please email us at [petc@apti.org](mailto:petc@apti.org) and put PETC Mentorship in the subject line. We will work to get match-ups made but our bi-annual meeting in April.

### Disaster Response Initiative

Since its inception, APT Disaster Response Initiative (DRI) has fostered relationships with US Federal and State agencies to provide technical preservation assistance for disaster response. Because of these efforts, we feel APT is better positioned with FEMA, DOI, and HENTF before, during and following disasters. For example, on October 28th, Hurricane Zeta devastated the Southeastern states of Louisiana, Mississippi, and Alabama causing \$3.5 billion in damage to the already struggling states after a punishing 2020 hurricane season. Out of the damage, APT DRI received our first time-sensitive call for assistance to address the damage to the Airmount Grave Shelter in Alabama, a small, but culturally significant property listed on the National Register of Historic Places.



The DRI mission is to assist like-minded organizations in protecting heritage structures vulnerable to natural and man-made disasters. We need problem solvers for this initiative: Do you have what it takes? Thank you to all APT and PETC members who

have responded to our emails and calls for action.

Please join APT DRI and help the task leads: John Dumsick, Rachel Palisin, Adam Rush, Payal Vora, and Will Teron with the many initiatives facing this group. If interested or have questions on how to get involved, please reach out to PETC at [petc@apti.org](mailto:petc@apti.org).

## **APT Annual Conference - PETC Workshop and Symposium**

PETC is leading up two workshops/symposiums for the upcoming APT Conference in Washington DC. We look forward to you joining us for one or both of these programs.

### ***APT Workshop: URM Construction, Restoration, and Maintenance***

The Unreinforced Masonry (URM) Construction, Restoration, and Maintenance workshop will focus on understanding the rationale and methodology for condition assessment and the repair, restoration, and maintenance of historic URM buildings. The workshop will provide insight into common types of deterioration and material behavior along with specific intervention methods and materials that may be appropriate and sympathetic to the original materials. Treatments consider the U.S. Secretary of Interior Standards when the URM building is historic.



Presentations will focus on URM materials, systems, repair and restoration strategies, maintenance strategies, as well as interventions to assist water management. A specific presentation will address mortar replication and pointing. We will work to make these live as well as virtual.

The workshop will include six hands-on stations such as slaking lime and pointing mortar, mortar analysis, composite stone patching, stone dutchman repairs, lintel flashing and brick replacement, and joint protection demonstrations with sealant installation and pull testing. If live hands-on is not possible, we will work to create video demonstrations of the various hands-on for virtual sessions.

Additionally, URM seismic upgrade option presentations will be offered virtually and on-demand for workshop attendees to access prior to or after the workshop. We will use our international colleagues in the industry to illustrate various options that are sensitive to historic URM construction. A holistic approach to URM facades is critical to its restoration and seismic upgrades.

### ***APT Symposium: Protecting the Irreplaceable: Sensitive Measures to Safeguarding Cultural Heritage Properties***

This symposium was developed in response to the growing need for physical security improvements to culturally significant properties and collections against man-made threats. Learning how to sensitively introduce security measures without adversely impacting the historic character of buildings and landscapes is challenging, but can successfully be achieved.



Given this year's APTI Conference is in the District of Columbia, it can be argued that

no other location offers the level of opportunity to explore this topic more fully. The recent events at the US Capitol reiterate the need for in-depth discussion of the protection and security needs of culturally significant sites and structures. This training gives attendees guidance on understanding security threats, along with principals and strategies for protecting cultural heritage, staff and the general public. Case studies will highlight properties where changes were made, while still meeting preservation guidelines.

We anticipate the first day as a series of lectures given by preservation professionals and security experts. These presentations will be in-person or virtual depending on the circumstances at the time. If virtual, the lectures could be “attended” in advance. The second day is a walking tour of sites in and around the National Mall. Possible stops include the Lincoln Memorial, Washington Monument, Smithsonian Institution, Department of State, Eisenhower Executive Office Building and the White House.

The Team is currently identifying lecture topics and potential speakers to develop a working schedule, drafting a list of potential walking tour sites and outlining logistics. This two-day hybrid symposium will be facilitated by Audrey Tepper, Erica Inmacolato, Tobin Tracey, and John Dumsick and will have space for approximately 60 people. APT Members with an allowance for local, state, and federal government employees who require protection of culturally significant properties.

If you are interested in helping with the development of this symposium or have a potential speaker in mind, please do not hesitate to contact John Dumsick at [dumsickje@state.gov](mailto:dumsickje@state.gov).

## **Upcoming Events**

### **Earthquakes and Traditional Constructions (Part 1)**

Join the International Scientific Committee on the Analysis and Restoration of Structures of Architectural Heritage for a webinar on earthquake engineering with traditional structures. Speakers will be looking at traditional mitigation measures, damage assessment, and retrofitting techniques used around the world. February 25th from 14:00 to 16:00 GMT.

Register in advance for the February 25th, 2021 meeting here:

<https://zoom.us/meeting/register/tJMpdOitrDMiE9dKZPKd23ScbmJdLkRt3bUY>

## **Committee Reports, Minutes, News**

The minutes from the September 29, 2020 PETC Annual Meeting is available to view on the PETC website at this [link](#). We will continue to add and archive future committee reports, meeting minutes, as well as our PETC News eblasts to this location so you don't miss out on our initiatives!

## **Virtual Bi-Annual PETC Committee Meeting**

As indicated during Annual Meeting held on September 29, 2020 in conjunction with the Fall Conference, PETC is hosting a second virtual committee meeting for the PETC approximately 6 months prior this fall's Conference in Washington, D.C. This meeting will be held on **Thursday April 29, 2021 at 12:00 PM Central Standard Time (CST)**, please register for the zoom meeting [here](#). Agenda to follow at a later date for registrants of the meeting.

## **Communication**

PETC will communicate to our members via Constant Contact eblasts through APT International. We will also add committee news to the Communique and other APT social media, such as Facebook, LinkedIn, Twitter, and others. If you have news appropriate for PETC to distribute, please email us at [petc@apti.org](mailto:petc@apti.org) and we can assist

with spreading the word. We will use **#APTPETC** and encourage you to do the same for posts relevant to our community of members.

## Join PETC

If you are not on our PETC mailing list, please email us at [petc@apti.org](mailto:petc@apti.org) to join! Please feel free to forward this email to others you think might be interested in our goals and activities. We would love to have them!

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APT Preservation Engineering Technical Committee  
[petc@apti.org](mailto:petc@apti.org)

