



MEETING MINUTES

342 - Evaluation of Concrete Bridges and Bridge Elements

ACI Fall Convention 2018

Meeting Schedule: Sunday October 14, 2018 (8:30 am-10:30 am)

Coco A-B Room – Rio All-Suites Hotel (Las Vegas, NV)

1. Opening

- 1.1. The meeting was called to order at 8:30 am by Nestor Rubiano, Committee Secretary.
- 1.2. Nestor welcomed committee members and visitors. He mentioned that Dr. Devin Harris, Committee Chair, was not able to attend the meeting due to a schedule conflict.
- 1.3. Minutes for the previous meeting (Spring Convention in Salt Lake City) and Agendas for the current meeting were distributed.

2. Invited Speaker Presentation

- 2.1. Nestor introduced the invited speaker, Dr. Sattar Dorafshan who recently completed his PhD degree at the Utah State University. He presented a lecture titled “Structural Condition Assessment Using Small Unmanned Aerial Systems,” based on his research for his PhD dissertation.
- 2.2. The advisor of Dr. Dorafshan at Utah State University, Dr. Marc Maguire was also in attendance supporting the presentation.
- 2.3. The audience found the subject to be very interesting and the presented content generated multiple discussion points listed below.
 - 2.3.1. Accuracy of the system during data collection and subsequent post-processing.
 - 2.3.2. General limitations in detecting small defects. Sattar indicated that detection of fatigue cracks in steel members is not feasible with current state-of-art drones.
 - 2.3.3. Use of drones equipped with infrared cameras and contact-free GPR scanners is currently being evaluated at research level for potential use in practice.
 - 2.3.4. Discussion on regulations associated with use of drones in bridge and building inspections.
 - 2.3.5. Cost of post-processing of data compared to savings in inspection time and limited traffic interruptions.

3. Administrative

3.1. Introductions and attendance

Committee Members present:

Voting: Nestor R. Rubiano, Rita Oglesby, Mark Williams, Mohamed Mahgoub, Larry Olson, Mohamed ElBatanouny, Pinar Okumus



Associate: Samuel Keske, Paul St. John, Michael Brown, Rafael Anay

Visitors: Mengesha Beyene, Marc Maguire, Sattar Dorafshan, Robert Barnes, Ali Abu-Yosef, Chris Williams, Eric Kreiger, Dario Coronelli, Patrick Wolert, Anjan Babu

Consulting: None

Regrets: Devin Harris, Eva Lantsoght and Om Dixit

ACI Staff: Jerzy Zemajtis

3.2. At about 9:20 am, the meeting was started by Nestor. He thanked Dr. Dorafshan for the presentation and encouraged committee members and visitors to participate in future sessions and mini-sessions. Nestor reiterated Devin's desire to keep the committee active in hosting sessions and mini-sessions during future conventions.

3.3. Announcements:

There were no new announcements.

3.4. Intervening actions since last meeting.

- Nestor announced the balloting and approval of the minutes for the 2019 Spring convention held in Salt Lake City, UT.

4. Strategic Planning and Discussion

4.1. Membership

- In a membership update, Nestor mentioned that there were no changes in membership since last meeting
- Nestor discussed the need to invite DOT employees to get involved in the committee as Devin had mentioned during previous conventions. He asked members to reach out to contacts and attract new DOT-affiliated members

5. Documents Under Development

The document **342.YR** "*Concrete Bridge Condition Assessment and Performance Monitoring*" is currently under development by the committee. Below are the highlights of the committee discussion related to this document:



- Larry Olson provided a brief update to the committee on the progress of the ACI 342.YR report.
- Larry indicated that the progress to date is limited.
- Larry reached out to authors and Chapter champions two weeks before the convention to get update on progress.
- Pinar Okumus indicated that Chapter 7 is two thirds of the way done. The group working on Chapter 7 uses Google Docs to add and edit different parts of the chapter by different contributors.
- Larry will reach out to the champion(s) of each chapter and plan to schedule an online meeting to discuss progress and establish timeline for advancing the document

6. New Business

6.1. Sessions and SP Focus Topics for Future Conventions

Nestor mentioned that the committee has two proposed sessions for the upcoming Spring 2019 convention in Quebec City:

- *“Advances in Modeling and Analysis for Evaluating Concrete Bridges”* led by Bruno Massicotte and Ben Dymond. Bruno and Ben were not present during the meeting. Michael Brown indicated that the presenters identified in the preliminary list were contacted and the moderators are making progress to finalize the list of presenters.
- *Innovative Techniques for Evaluating Concrete Bridges”* led by John Myers

For the Fall 2019 Convention in Cincinnati, Ohio, the committee has proposed hosting one session: *“QA Evaluation of Concrete Bridges for Long Term Durability”*

- A request for the session has not been submitted yet.
- Larry Olson will submit a request before the end of the week.
- Mark Williams, Chair of Committee 345 (Bridge Construction and Preservation) said that he believes that Committee 345 will be interested in co-sponsoring the session in Ohio. He will discuss the subject during committee 345 meeting.
- Michael Brown indicated that he is interested in presenting the inclusion of GPR surveys in Virginia’s DOT standard specifications for quality assurance. Michael will submit an abstract for the session.

Nestor went over the list of the previously generated potential session topics. He suggested that some of the sessions can be made as mini-sessions, if insufficient number of presenters can be secured.



Nestor also asked the committee members for suggestions on new topics.

Discussion ensued regarding the potential Session Topics identified:

- Nestor mentioned that if anyone want to champion a session during the Chicago (Rosemont) Convection from the previously generated list of topics, it needs to be proposed soon.
- Pinar Okumus said that she will propose submitting a session on Analysis of Existing Concrete Bridges for the Chicago convention.
- Because of the interest generated during the presentation at the beginning of the meeting, Nestor indicated that the topic of using drones in bridge evaluation and condition assessment can be a good topic for future conventions.

7. Relevant Sessions for Current Convention

7.1. The list of sessions relevant to the work this committee was reviewed:

- The Dennis Mertz Symposium on Design and Evaluation of Concrete Bridges
 - Part 1 – Sun, Oct 14, 2018 10:30 am - 12:30 pm, Amazon Q-R
 - Part 2 – Sun, Oct 14, 2018 1:00 pm - 3:00 am, Amazon Q-R
 - Part 3 – Mon, Oct 15, 2018 10:00 am - 11:00 am, Amazon M
 - Part 4 – Mon, Oct 15, 2018 2:00 pm - 3:00 pm, Amazon O
- Hot Topic Session: Can Codes and Standards Improve the Performance and Longevity of Existing Concrete Structures?
 - Sun, Oct 14, 2018 8:00 pm - 10:00 pm, Amazon Q-R
- The Role of Materials in Sustainable Concrete Construction
 - Part 1 – Mon, Oct 15, 2018 11:00 am - 1:00 pm, Amazon Q-R
 - Part 2 – Mon, Oct 15, 2018 1:30 pm - 3:30 pm, Amazon Q-R
- Analysis and Interpretation of Structural Health Monitoring (SHM) Data: Big Data Management and Field Studies
 - Wed, Oct 17, 2018 8:30 am – 10:30 am, Amazon Q-R

7.2. Michael Brown discussed the sessions honoring Dr. Mertz, which are taking place during this convention. He reminded everyone that Dr. Mertz was very active in bridge research and development of the AASHTO LRFD Bridge Specifications. Dr. Mertz passed away a while back and multiple committees put together a symposium to honor him. The sessions will be moderated by Dr. Hani Nassif and Dr. Andrzej Nowak.

7.3. Part 3 of the symposium is a mini-session that will take place during Committee 343 meeting. Michael Brown invited the members and visitors to attend and participate in this mini-session. He also indicated that the presentations in the symposium will be part of a Special Publication



8. Upcoming Sessions

8.1. Mark Williams indicated that Committee 345 will host the following sessions during the two upcoming conventions:

- Spring 2019: “Advances in Construction, Evaluation, and Repair of Concrete Structures and Materials”. The session is co-sponsored with ACI Committee 369 and will be moderated by Jimmy Kim
- Fall 2019: “Prestressed Concrete with Conventional and Non-Conventional Materials”. The session will be moderated by Jimmy during the Cincinnati convention.

8.2. Mark also indicated that the 345 committee is pursuing a session for Fall 2019 titled: “Durability of new repair materials for Bridge Maintenance”. The session will be moderated by Paul St John and Michael Brown.

9. Other Announcements

9.1. Announcements for conferences and call for papers/abstracts included in the agenda for this meeting were briefly reviewed.

9.2. Michael Brown encouraged the committee members to get involved with SEI and attempt put sessions together during the Structure Congress.

9.3. Nestor invited members to reach out to him or Devin Harris, the committee chair if interested in presenting topics related to the work of the committee during future meetings.

10. Adjournment

The next meeting will tentatively be held on Sunday March 24th, 2019 (8:30-10:30am)