



TRB  **2020**
ANNUAL MEETING

99TH Annual Meeting
Washington, D.C.
January 12–16, 2020

Division of Bridge Engineering and Infrastructure Management

Bureau of Structural Engineering

Xiaohua “Hannah” Cheng, Ph.D., P.E.

TRB 99th Annual Meeting, January 12-16, 2020, Washington, DC

NJDOT Recap of TRB Annual Meeting

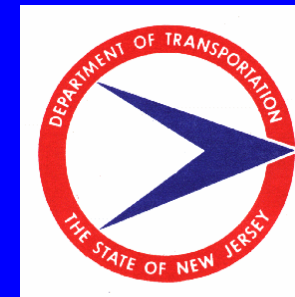
- Bridges and Structures

Xiaohua “Hannah” Cheng, Ph.D., P.E.

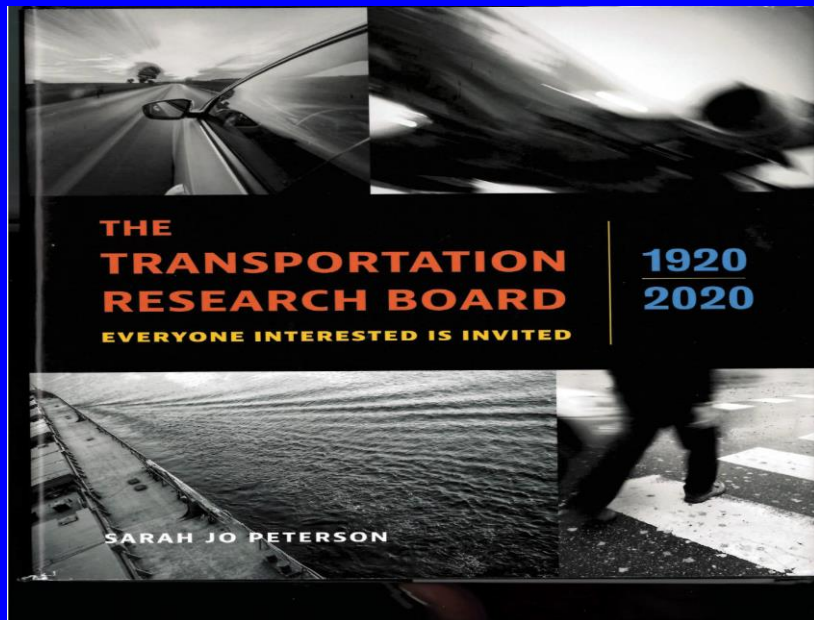
Bureau of Structural Engineering,
Division of Bridge Engineering and Infrastructure Management,
NJDOT



Feb. 13, 2020, NJDOT MPR



TRB is Celebrating 100 Year Anniversary



2020:

- Total attendees: ~13,800
- Papers submitted: 6000+

Following is recap of Workshops, Sessions, Events, and Committee Meetings I attended.

Workshops

- **Workshop 1086 – “Employing Weigh-in-Motion Data to Design, Rate, Manage, and Preserve the Nation’s Bridge Structures”**
 - Recent Truck OS/OW research topics (*FHWA Report; Permit Load; Load Factor/LRFR; FAST Act EV; SHV evaluation; Truck platoon*)
 - WIM sites/Traffic data (ADTT); Truck regulation; Bridges; Roads; Traffic pattern;
 - Case study: LADOT; NYSDOT
 - Takeaway: 1) Site-specific WIM for bridge evaluation;**
2) Statewide WIM for NJDOT Permit Vehicle update
- **Workshop 1780 – “Resilience, Safety, and Security of Bridges and Tunnels: US and International Topics”**
 - FHWA Bridge Security Manual updates (to include vulnerability analysis)
 - FHWA Bridge Security Research Gaps
 - Tunnel Safety
 - **Case study and Consequence of Bridge Fire (e.g. NJTPA)**
 - PIARC/WRA Program to Improve Resilience of Roads
 - FIU Pedestrian Bridge Collapse analysis (other than NTSB report)

Lectern Sessions and Event

- **#1265 – “FHWA Long-Term Bridge Performance Program” (LTBP)**
(Historical design/construction changes; Climate change cycles; NBIS data implementing; Phase III data collection/analysis; Search in InfoBridge™)
- **#1110 – “Advances in Bridge Engineering and Performance”** *(Link slab; LRFR for EV; Adhesive anchor bolts; skew bridge)*
- **#1184 – “Corrosion Evaluation and Preservation in Transpt Structures”**
(MSE wall; CFRP PS tendon; A1010 stainless bridge)
- **#1591 – “Current Topics in Steel Girder Bridges”** *(AWS D1.5 weld inspection PAUT; Simple for DL Continue for LL for seismic app; Curved steel girder integral abutment bridge; Long span bridge steel/concrete connection mass concrete control)*
- **#1668 – “Seismic Bridge Engineering Research, Analysis, and Design”**
- **#1712 – “Seismic Bridge Engineer: Historic Perspective”** *(USGS seismic hazard maps evolution; Lessons learned from Earthquakes; AASHTO seismic design code evolution)*
- **Chair’s Luncheon Key Note - Transportation Secretary Elaine Chao**
 - **Autonomous vehicles DOT-WH initiative (AV 4.0)** *(Data-sharing partnership program b/t government and private sector)*
 - New pilot program to deploy V to V and V to infrastructure communication (V2X) for emergency response

Committee/Subcommittee Meetings

- **AFF10 – “General Structures”** (*AFF80 FRP merged; BIM modeling; Information delivery modeling; FDOT WIM; Bridge aesthetics*)
- **AFF10(1) – “Traffic Structures” Subcommittee** (NCHRP; KSDOT HMLT)
- **AFF20 – “Steel Bridges”** (NSBA update; ASTM update; A1010; RNS)
- **AFF40 – “Testing and Evaluation of Transpt Structures”**
- **AFF50 – “Seismic Design and Performance of Bridges”**
- **AFH70 – “Fabrication and Inspection of Metal Structures”**
- **TRB AFF00/AASHTO CBS/FHWA Structures Collaboration**
 - FHWA Bridge Office: *Proposed new rules on bridge inspection – risk based intervals & critical findings; NTSB on FIU bridge collapse investigation*
 - FHWA R&D updates: *e.g. 3D printing for bridges*
 - NCHRP project updates: *e.g. MASH implementation; AASHTO CBS Roadmap for implementation*
 - AASHTO CBS vs TRB matching committees