



Transportation Research Board Annual Meeting

**MINUTES**

**Committee on Traffic Flow Theory and Characteristics (AHB45)**

Monday, January 14, 2019 1:30 PM-5:30 PM, Marriott Marquis, Marquis Ballroom Salon 6, Washington, D.C.

Chair: S. Ahn

Minutes prepared by: V. Gayah

**Welcome and Call to Order** **S. Ahn**

**Introductions – Members & Friends** **All Attendees**

- See sign-in sheet for full roster of attendance

**Review and Approval of Minutes** **S. Ahn**

- Committee Meeting of January 8, 2018
- Committee Meeting of August 8, 2018

**FHWA Programs & Activities** **J. Sturrock**

- This item was canceled due to the government shutdown that prohibited travel by federal employees

**Transportation Research Record partnership with SAGE** **P. Lockhart/SAGE**

- New features of the SAGE TRR journal were introduced, including:
  - Article metrics
  - Production
  - Marketing
- TRR 2017 impact factor increased to 0.695
- 90% of papers published by Sept 2018

**Membership** **S. Ahn**

- Membership rotation in 2019
- Committee communication volunteer needed

**TRB Report** **R. Cunard/R. Bertini**

- Travel restrictions due to government shutdown has precluded attendance of federal employees
- Large CAV showcase in exhibitor hall with AV demonstration
- Professional headshots being provided at TRB booth

- New paper submission/management software
- TRB recently published a critical issues document that outlines priorities for TRB
- 2020 AM theme: Century of Progress, Foundations for the Future
- TRB mobile app now syncs schedule from website
- Managed lanes committee won blue ribbon award for mentoring younger members, TFTC may want to look to this for a model of mentoring activities
- TFTC committee may plan special session for 100<sup>th</sup> anniversary meeting if desired
- Many positive changes with TRR since Sage took over:
  - Papers published faster (90% by September 2018)
  - Open access now an option or ~\$3K
  - Referencing format is more robust and will be changed to a more standard version in the future
  - Altmetrics available for TRR papers;
  - Automatic plagiarism check was implemented
  - Options now available for multimedia elements (video, etc)
  - In the future, excellent papers from midyear meetings/other conferences can be pushed into TRR
- First pass at paper routing handled by keywords automatically (AI), which might have led to incorrect routings. Authors should include TFTC as a keyword or abstract
- Papers will only be available on TRBAM Online for three years

#### **TFTC Subcommittee Reports**

##### **Joint Subcommittee on Traffic Simulation Models (AHB45(1) SimSub)**

**M. Hadi**

- Workshop sponsored by subcommittee held on Sunday: Modeling uncertainties in cooperative automated vehicles in which 6 presentations were made
- Reorganization in process to seek formal TRB membership. This gives the TSSM an official “home” (mimicking the HCQS model)
- This new committee is seeking members

##### **Crowd Flow Dynamics, Modeling and Management (AHB45(2))**

**W. Daamen/S.  
Hoogendoorn**

- Workshop sponsored by subcommittee held on Sunday
- 2020 summer meeting of subcommittee to be held in Melbourne
- Subcommittee is working on a monograph to give insight for pedestrian traffic flow and crowd dynamics
- Research agenda being worked on, 12 topics currently identified

##### **Connected Automated Vehicles (AHB45(3))**

**S. Hamdar**

- A call for papers organized by this subcommittee led to 13 papers, 1 posted session and 1 lecture session
- Workshop sponsored by subcommittee held on Sunday: Real and Virtual Data Collection Platforms for Connected and Automated Vehicles Modeling, Calibration, and Validation
- AVS2019 session related to this subcommittee will be held; specific topic under discussion but

will be finalized by end of TRB AM

- Multiple calls for papers related to this topic in several journals (AAP, metrica A, TR-C, IEEE TITS)
- Website and data hub available: <https://tftcav.seas.gwu.edu/exchange-portal/>

### **Research Problem Statements**

**M. Hadi**

- New chair and committee members needed to develop and maintain up-to-date set of peer-reviewed research needs statements that can be included in TRB research needs statements database
- The goal is to maximize probability topic becomes funded through NCHRP projects in the future
- Existing statements/survey is ~10 years old

### **Paper Review**

**S. Ahn**

- Four special call for papers sponsored by TFTC committee
  - Big Data and Machine Learning Methods in a Connected Traffic Environment: From Empirical Experimentation to Analytical Modeling
  - Large-scale urban traffic network modeling and control
  - Crowd dynamics: empirical analyses, modeling, simulation, and management
- Paper statistics
  - 196 papers received, 116 for publication
  - 104 presented, 4 lectern sessions, 5 poster sessions
  - 23 publication slots
- Current committee policy: at least 2 reviews for presentation only, at least 3 reviews for papers submitted to publication
- Best reviewer award presented Hani to Mahmassani

### **Chair Report**

**S. Ahn**

- TRB activities
  - Two committee-sponsored workshops
  - Five lectern sessions
  - Five poster sessions
  - Two subcommittee meetings
- Existing Task Force on System Simulation disbanded due to SimSub seeking full committee membership
- NSF outreach sessions canceled due to government shutdown

### **Greenshields Prize & Awards**

**L. Leclercq/M. Menendez**

- Five award decisions to be made annually: two internal to committee and three recommendations to TRB
- Please mention award eligibility status on title page of paper to help the process; papers must be submitted for publication to qualify
- 2018 Mickle nomination not made
- 2018 Cunard award presented to 18-01047 Introducing a re-sampling methodology for the estimation of empirical macroscopic fundamental diagrams

- 2018 Greenshields award presented to 18-00020 Resurrecting the lost vehicle trajectories of Treiterer and Myers: with new insights into a controversial hysteresis
- 2018 Best Paper on Traffic Flow Theory presented to 18-04291 Control of connected and autonomous vehicles with cut-in movement using spring mass damper system

### **Mid-Year Meetings**

#### **Woods Hole, MA, August 7-9, 2018**

**C. Buisson/D. Chen/S. Ahn**

- Consisted of 23 paper presentations, 5 keynote lectures and a classic papers retreat
- Presentations available at [tftc2018.sciencesconf.org](http://tftc2018.sciencesconf.org)
- Classic paper retreat generated a lot of interest with good discussion; committee should consider repeating. Major takeaway: why and how to promote reproducible research?

#### **TRC Special Issue**

**C. Buisson/D. Chen/S. Ahn**

- Traffic flow modeling: New data, problems and methods in the era of big data and connected and automated transportation
- 21 papers received so far
- Deadline to submit papers is February 28, 2019

#### **Next midyear meeting**

- To be held during 2019 ISTTT

#### **2020 midyear meeting**

- Two proposals:
  - 1) Joint event with AVS in 2020;
  - 2) Amsterdam Aug 17-19 with a potential theme of Traffic flow theory and the city
- After a committee vote, it was decided that the meeting will be held in Amsterdam

### **Outreach and Diversity**

**S. Hamdar/A. Talebpour**

- Newsletter will be hosted at [tftcnews.blogspot.com](http://tftcnews.blogspot.com) and will return end of January 2019
- The TFTC YouTube channel has 8 interviews available
- An online journal club is being organized in which students present paper they or someone else authored to generate discussion; the plan is to meet once every two weeks to discuss a paper selected by nomination process; goal is to start in February with a tentative time of Thursdays at 4PM EST

### **Committee Website**

**R. Bertini/A. Zockaie/R. Aghamohammadi**

- TFTC TRR Google Scholar page and list of papers updated
- ISTTT Google Scholar page updated and list of papers updated
- Request that all members and friends link to TFTC website from personal websites
- Request for education materials to be placed on the website to generate more traffic/share materials with the community, including seminal papers (if possible, Ali to check into this)

**MFD Dataset****J. Laval**

- Data might be made available soon

**Analysis of PhD Supervisors****N. Chiabaut**

- Survey and results on PhD institution and current location

**TRB Centennial Paper****S. Ahn**

- 100<sup>th</sup> anniversary of TRB in 2020
- Centennial paper being prepared

**Liaison with other Committees****All Attendees****Highway Capacity Quality of Service Committee (AHB40)****A. Skabardonis**

- New chapter for two-lane highways being prepared
- Pooled fund study on estimates of capacity (freeways and arterials) in CAV environment from a planning level

**Task Force on System Simulations (AHB80T)****R. Bertini**

- Task force has been sunsetted
- SimSub is now the owner of this manual and will try to lift profile to a full TRB committee

**International Liaison****International members and attendees**

- New book by Victor Knoop (Introduction to TFT: An introduction with exercises, second edition) available

**Traffic monitoring with a swarm of drones****N. Geroliminis**

- 10 drones recording traffic in Athens to obtain trajectories to share with the research community
- Over 500,000 trajectories available
- Data should be made available by next TRB

**Announcements and Future Meetings****All Attendees**

AVS19 Orlando, FL, July 15-18, 2019

**S. Hamdar**

Propose workshop? Break-out session?

ISTTT23 Lausanne, Switzerland, July 24-26, 2019

**N. Geroliminis / L. Leclercq**

TFTC Midyear Meeting, 2020 (Amsterdam)

**S. Ahn/S. Hoogendoorn****New Business****All Attendees****2020 Annual Meeting Calls for Papers****All Attendees**

- Potential calls for papers for TRB centennial meeting: review papers? Reproducible research?

**Adjourn**

**All Attendees**