

Transportation Research Board Midyear Meeting  
**Meeting Minutes**

Committee on Traffic Flow Theory and Characteristics (AHB45)  
1:30-5:30 pm, January 8, 2018  
Washington, DC

Chair: S. Ahn

Minutes prepared by: V. Gayah

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

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

- See sign-in sheet for full roster of attendance

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

- Committee meeting of January 9, 2017
- Committee meeting of July 23, 2017

**Diversity Statement on Behalf of TRB and NAS** **S. Ahn**

**FHWA Programs and Activities** **J. Sturrock**

- ATDM/DMA Testbed
  - Reports available on JPO (Joint Program Offices) website
  - Tools available on Research Data Exchange
- Traffic Analysis Tools Volume III Revision
  - Contract ongoing to develop workshop materials, deliver six workshops
  - Tools being updated to incorporate reliability
  - Guide being developed to evaluate performance objectives at the regional level
  - Draft version to be released in Q1 or Q2 2018
  - Final version to be released in 2019
  - SHRP2 reliability methods to be implemented in five states
- Trajectory Validation Engine Project

- Report should be published within the next six months
- Predictive Engine Report
  - Report currently being finalized and will be published soon
- TSSM picked up by Traffic Analysis and Simulation Pooled Fund study being supported by 13 states
  - Task Force on Systems Simulation helping to review materials
- FHWA developing guidance for use of simulation and analytical tools to evaluate impacts of CAVs

## **TFTC Subcommittee Reports**

### ***SimSub***

**M. Hadi**

- Sunday workshop
  - 8 presentations
- Best paper award
  - No theoretical paper award given this year
  - Applied-based paper award given to “Improving scalability of generic online calibration for real-time dynamic traffic assignment systems”
- Life-time award provided to Alex Skabardonis
- SimSub report provided by David Hale
- Potential collaborative activities between SimSub and ITE SimCap
  - Pedestrian and safety modeling
  - CAV and reliability outreach activities to the community; bridging the gap between research and practice
  - Consistent and reliable data sources

### ***Crowd flow dynamics***

**W. Daamon**

- CFP received 16 papers
- Workshop to be held on Thursday of Annual Meeting
- Plans in place to write a book on the topic

### ***Connected Automated Vehicles***

**S. Hamdar**

- CFP received 27 papers
  - 5 presented at lectern session
  - 8 poster presentations
  - 4 possible considerations for publication

- Sunday workshop
  - Data collection, experiments and instrumentation in Connected Multimodal Transportation Systems
- Automated Vehicle Symposium (AVS) 2017
  - Breakout session held on “Enhancing the validity of traffic flow models with emerging data”
    - Report being prepared
  - 2016 AVS book chapter being published
  - 2017 and 2018 book chapters will follow
- Traffic and Granular Flow 2017: Role of technology in traffic flow modeling
  - 3 journal special issues being prepared (Journal of ITS, Journal of Traffic and Transportation Engineering, TR Part C)
- Data exchange platform and expertise library are works in progress (see website [tftcav.seas.gwu.edu](http://tftcav.seas.gwu.edu))
- Subcommittee name will be adjusted to reflect multimodal nature of committee not just vehicles (Connected and Automated Traffic Flow Modeling)

### ***Paper Review***

**S. Ahn**

- Special calls for papers
  - Four special calls this year
    - Crowd dynamics: Empirical analyses, modeling, simulation and management
    - Advances in modeling and traffic management for large-scale urban networks
    - Connected multimodal transportation system modeling and simulation
    - Multimodal system analysis and modeling
  - Special calls for 2019 AM due May 2018
- For presentation:
  - 194 papers received
  - 25 included in 5 lectern sessions
  - 84 included in 4 poster sessions
- For publication:
  - 129 papers received
  - 34 to be revised and resubmitted
  - 25 publication slots available

- Updated review timeline
  - August 1 – Papers due
  - August 20 – Reviews assigned
  - September 15 – Reviews due
  - October 15 – First round of recommendations made
    - Accept
    - Revise and resubmit
    - Reject
  - November 15 – Revised papers due
  - December 15 – Second round of recommendations made
    - Accept ‘minor revisions’ papers
    - Re-review
    - Reject
  - January 31 – Final decisions made
  - List of accepted papers presented and will be updated on committee website on an ongoing basis
- Inaugural best reviewer award presented to Christine Buisson

### **Chair Report**

**S. Ahn**

- Committee activities at 2018 AM
  - 5 lectern sessions
  - 4 poster sessions
  - 4 workshops
    - Doctoral student workshop
    - Data-driven simulation to support decision making in the 21<sup>st</sup> century: Barriers and potential benefits
    - Data collection, experiments and instrumentation in connected multimodal transportation systems
    - ITS for crowd management: Recent advances in data and models

### ***Paper Awards***

**L. Leclercq**

- Dr. Grant Mickle award to TFTC paper
  - Paper number 00884: Improving street network efficiency by dynamically prohibiting left turns at signalized intersections
- Fred Burggraf award to TFTC paper

- Paper number 00887: Estimating the impacts of bus stops on transit signal priority on intersection operations: A queuing and variational theory approach
- Greenshields award:
  - Paper number 6081: Traffic state estimation with link-queue models
- Theoretical paper award:
  - Paper number 6294: Framework for deriving macroscopic demand function from microscopic models
- Please mention if papers are eligible for Burggraf award on cover page!
- Membership changes:
  - L. Leclercq will step down and M. Menendez will chair committee after this year
  - N. Gartner stepping down from committee
  - J. Kim joining committee

### **Midyear Meeting**

**S. Ahn**

- 2018: August 7-9, 2018 at Woods Hole, Massachusetts, USA
  - Topic: Overcoming the current limitations of our traffic models
  - Simulation Manual Task Force Retreat being considered for August 10, 2018
  - Abstracts to be submitted April 15, 2018
  - Notification of acceptance July 1, 2018
  - May be associated with CFP with Transportation Research Part C
    - Full papers due October 1, 2018
    - Final decision by May 15, 2019 after two rounds of review
  - Classic paper retreat to be held in conjunction
    - List of papers will be provided
    - 3-4 will be selected and discussed
    - PhD students and/or postdocs will lead discussion
- 2019: in Lausanne, Switzerland in conjunction with ISTTT23
- 2020: looking for options
  - Potentially with AVS in Denver?

### **Outreach and Diversity**

**A. Talebpour**

- Newsletter (<http://tftcnews.blogspot.com/>)

- Every 2 months (**please send news**)
- YouTube Channel (<https://www.youtube.com/user/AHB45/feed>)
  - 8 interviews
- Facebook page (<https://www.facebook.com/AHB45>)
- ISTTT22 paper webinars will start soon
- Committee website (<http://tft.eng.usf.edu/>)
  - Ali taking over update of website
- New seminar series on automated vehicles coming up

### ***MFD Data Quest***

**J. Laval**

- Data needed!
  - Many researchers indicated they would provide data but only one dataset has been provided
- New data hub: CAV data from companies and OEMs
  - Effort being supported by NSF
  - Need to get FHWA involved

### **Liaison with Other Committees and Other News**

- HCQS committee J. Sturrock
- Young members council E. Gonzales
- International L. Leclercq
  - Decision mobility game: A tool to study travelers' choice behavior
  - Part of MAGnUM
  - Three 2-hour sessions organized in February, March and April
  - Data will be available to researchers upon project completion (2020)
- "Introduction to Traffic Flow Theory" text by V. Knoop
  - Free to download
  - Over 250 questions and solutions available
- Meetings of interest
  - AVS2018
    - July 9-12, 2018 in San Francisco
  - TFTC Midyear Meeting
    - August 7-9, 2018 in Woods Hole
  - 2<sup>nd</sup> Symposium on Management of Future Motorway and Urban Traffic Systems
    - June 11-12, 2019 in Ispra, Italy

- Mathematics Applied to Traffic and Transport Systems
  - June 13-15, 2018 in Amsterdam
- ISTTT23
  - July 24-26, 2019 in Lausanne

## Break

### *TSSM Discussion*

**R. Bertini**

- Key question: Is TFTC committee interested in being responsible for maintaining and updating the TSSM (Traffic Systems Simulation Manual) from now on?
  - Positives:
    - Can be used to generate research statements / attract NCHRP projects that members of our community can participate in to update manual
    - Manual would likely change rapidly and our committee might want to have a hand in shaping it for future years
  - Negatives:
    - Final product has not been published yet so we do not know if it includes theories/methods that our community is interested in building upon
    - Many activities required to keep a manual alive might not be of interest to this committee (e.g., editing, updating non-research components)
  - Tentative solution:
    - SimSub committee serves as the home for the manual and handles the practitioner/maintenance side
    - TFTC committee will create joint research committee with SimSub to help and contribute to theory and research needed to expand manual in future iterations

### *TRB Report*

**R. Bertini**

- 2019 AM Theme: Transportation for smart, sustainable and equitable future
- Sage publications taking over post-production of TRR
  - Can accept both Word and LaTeX files; LaTeX template forthcoming
  - Open access now an option for \$3K/article

- Papers will now only be available electronically, but will be uploaded as ready

**Adjourn**