Traffic Flow Theory and Characteristics Committee Meeting

2018 Midyear Meeting
Woods Hole, MA

August 8, 2018
Self-Introductions Members/Friends

Please don’t forget to sign in!
Announcement

Group Photo during Lunch
Agenda

- TRB Report: R. Cunard/R. Bertini
- FHWA Programs & Activities: J. Sturrock
- Chair Report: S. Ahn
- Membership: S. Ahn
- TFTC Subcommittee Reports
  - SimSub (AHB45(1)): S. Ahn/M. Hadi
  - Crowd Flow Dynamics, Modeling and Management (AHB45(2)): ?
  - Connected Automated Vehicles (AHB45(3)): S. Ahn
  - Research Problem Statements: M. Hadi
  - Paper Review: S. Ahn
  - Awards: M. Menendez
  - Outreach and Diversity: S. Ahn
- Midyear Meetings: S. Ahn/Attendees
  - 2018 – Woods Hole
  - 2019 – Lausanne, Switzerland (ISTTT 23)
  - 2020 – ?
- Liaison with other Committees: All Attendees
- Announcements and Future Meetings: All Attendees
- New Business: All Attendees
  - TRB Standing Committees Centennial Paper
TRB Report

- Rich Cunard
- Rob Bertini
U.S. DOT/FHWA Report

- Jim Sturrock
Membership

- Member Rotation in 2019

- Currently 38 members
  - 25 Regular
  - 5 International
  - 4 Young (younger than 35 years old)
  - 2 State DOT
  - 2 Emeritus

- Maximum: Three 3-year terms
Chair Report: Calls for Papers

- Crowd dynamics: empirical analyses, modeling, simulation, and management:
  https://annualmeeting.mytrb.org/CallForPapers/Details/594

- Big Data and Machine Learning Methods in a Connected Traffic Environment: From Empirical Experimentation to Analytical Modeling:
  https://annualmeeting.mytrb.org/CallForPapers/Details/568

- Large-scale urban traffic network modeling and control:
  https://annualmeeting.mytrb.org/CallForPapers/Details/523
Proposed Workshops at TRB 2019

- Modeling Uncertainties in Cooperative Automated Vehicles
  - AHB45(1) SimSub
  - Sunday, January 13th, 2019 (tentative)

- Real and Virtual Data Collection Platforms for Connected and Automated Vehicles Modeling, Calibration and Validation
  - AHB45(3) CAV Sub
  - Sunday, January 13th, 2019 (tentative)
<table>
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<th>Subcommittees</th>
<th>Leader</th>
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<tr>
<td>1. SimSub (AHB45(1))</td>
<td>M. Hadi</td>
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<td>2. Crowd Flow Dynamics, Modeling and Management (AHB45(2))</td>
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<td>7. Awards</td>
<td>M. Menendez</td>
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<td>- Award proposition (Reproducible research)</td>
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Joint Traffic Simulation (SimSub) Subcommittee Report

Presented by

Mohammed Hadi, Ph.D., PE
Florida International University

Traffic Flow Theory Committee Summer Meeting
Woods Hole, MA

August 2018
How will these CAVs interact will other vehicles (human-driven vehicles) and moving objects such as pedestrians, bicycles, etc?

How will the measurement errors from the numerous sensors (e.g., radar, lidar, GPS, etc.) affect the safety and mobility performance?

What effect will the false positives and false negatives of object detection and position have on these CAVs?

How will the dynamic temporal and special changes of the infrastructure affect the efficiency and effectiveness of these CAVs?

How can we enable AMS tools to evaluate CAV applications and the uncertainties that will exist.
SimSub Activities and Discussions

- Best paper award
  - Theory and application
- Life-time award Web site update
- SimSub report
- Support of TSSM research
- SimSub membership
- Centennial paper
Potential SimSub and SimCap Joint Activities

- Safety modeling
- Pedestrian modeling
- Product-specific guidance and information and meeting user community expectation by vendors
- How much calibration is enough/
- CAV and reliability outreach activities to the community
- Lessons learned, value of good simulation, return on investment (task group, problem statement for NCHRP synthesis).
  - Misuse of modeling
- Consistent and reliable data sources
- Ethical and credibility challenges, possibly certification
AHB45(3) Subcommittee: Traffic Flow Modeling for Connected and Automated Vehicles

AHB45 Summer Midyear Meeting
Woods Hole, MA, USA
August, 2019
Traffic Flow Modeling for Connected and Automated Vehicles – AHB45 (3)

Transportation Research Board Annual Meeting Events (13-17 January ’19):

a. **Call for Papers:**

b. **Workshop (Tentative: Sunday January 13, 2019):**
   Real and Virtual Data Collection Platforms for Connected and Automated Vehicles Modeling, Calibration and Validation
Traffic Flow Modeling for Connected and Automated Vehicles – AHB45 (3)

- **AVS 2018: No Active Participation**
  - Resuming participation in 2019 with better coordination
  - Possible organization of TFT 2020 Midyear Meeting along with AVS 2020

- **Book Chapters:**
  - Road Vehicle Automation 5: 2018: Enhancing the Validity of Traffic Flow Models with Emerging Data
  - 2019: No Participation
  - 2020: Tentative: From Construction to Modeling: Connected and Automated Vehicles’ Deployment, Management and Control
Additional Activities:

1- Two Active Special Issues/Call For Papers:

A- Traffic and Granular Flow 2017 - The Role of Technology in the Understanding and the Evolution of Traffic Dynamics
http://explore.tandfonline.com/cfp/est/jmt05562-gits-traffic-and-granular-flow-2017

B- Modeling and Detecting Traffic Dynamics: Granular, Pedestrian and Vehicular Flow

2- Possible expansion in mission/scope: Co-Sponsorship, More Active Role with USDOT/FHWA, Monograph/Manuscript Chapter?
Special Thanks to:

- Xiaopeng (Shaw) Li
- Meng Wang
- Mark Brackstone
- Michael Levin
- Danjue Chen
- Steve Mattingly
- Alireza Talebpour
- Alexander Skabardonis
- Sue Ahn
- Robert L. Bertini
Research Problem Statements
### Paper Review

- **New paper review system: Number of required reviewers**
  - Presentation only: at least 2 reviewers
  - Presentation and Publication: at least 3 reviewers

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<th>Dates</th>
<th>Process</th>
<th>Review Outcome</th>
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<tr>
<td>Aug 1</td>
<td>Papers due</td>
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<tr>
<td>Aug 20</td>
<td>Assign reviews</td>
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<td>Sep 15</td>
<td>Reviews due</td>
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<td>Sep 30 – Oct 15</td>
<td>1st round decision</td>
<td>Accept, RR (major revision, minor revision), Reject</td>
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<tr>
<td>Nov 15</td>
<td>Revised papers due</td>
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<tr>
<td>Dec 1 - Dec 15</td>
<td>2nd round decision</td>
<td>Accept ('minor revision' papers), Re-review, Reject</td>
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<td>Jan 31</td>
<td>Final decision</td>
<td>Accept within the quota (20%), Reject</td>
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TFTC Awards

- Award subcommittee (for the papers presented in January 2017):
  - Nathan Gartner
  - Ludovic Leclercq
  - Monica Menendez
  - Rob Bertini
  - Jiwon Kim

- Awards considered:
  - D. Grant Mickle Award
  - Fred Burggraf Award
  - Cunard Award
  - Best Paper on Traffic Flow Theory
  - Greenshields Prize
    - Resurrecting the Lost Vehicle Trajectories of Treiterer and Myersl: with New Insights into a Controversial Hysteresis (by Benjamin Coifman, Lizhe Li, Wen Xiao)
Awards

- Proposition of a New Award for the Operations Section
  - Reproducible Research (C. Buisson)
Outreach and Diversity Subcommittee

AHB45 Summer Midyear Meeting
Woods Hole, MA, USA
August, 2019
Outreach and Diversity Subcommittee

- Newsletter ([http://tftcnews.blogspot.com/](http://tftcnews.blogspot.com/)): 4 issues in 2018 (expected 8 issues in total before 2019 given the provided information) – Change in platform
- YouTube Channel ([https://www.youtube.com/user/AHB45/feed](https://www.youtube.com/user/AHB45/feed))
- Interviews Conducted by Alireza Talebpour for additional YouTube posting
- Facebook Page (Meead Sabri: [https://www.facebook.com/AHB45](https://www.facebook.com/AHB45))
- Paper discussion/exchange platform for young members to replace ISTTT 22 Webinar Series?
Outreach and Diversity Subcommittee

• Special Thanks to:
  o Alireza Talebpour
  o Justin Schorr
  o Meead Saberi
  o Xiaopeng Li
  o Robert Bertini
  o Sue Ahn
  o Jorge Laval

(All TFT website/facebook page/newsletter/webinar contributors and readers)
2018 Summer Meeting

- **Organizing Committee**
  - *Chairs*: Christine Buisson, Danjue Chen, Sue Ahn
  - *TRB*: Freda Morgan, Rich Cunard
  - *Sponsors*: Umass, Amherst, Aimsun, Caliper, INRO
  - *Members*

  Costas Antoniou, DE  
  Winnie Daamen, NL  
  Vikash Gayah, USA  
  Eric Gonzales, USA  
  Ilgin Guler, USA  
  Wei Long Jin, USA,  
  Mehdi Keyvan Ekbatani, NZ  
  Daiheng Ni, USA  
  Vincenzo Punzo, IT  
  Peter Wagner, DE  
  Haizhong Wang, USA  
  Zuduo Zheng, AUS
2018 Summer Meeting


- Classic Papers and Presentations on the Conference Website
Call for Papers for a Special Issue In Transportation Research Part C

“Traffic flow modeling: new data, new problems, new methods, and new models/theories”

Important dates:

- Special issue article type in EVISE: August 15th, 2018
- Submission deadline – February 15th, 2019
- Author notification of first round of reviews – April 1st, 2019
- Author notification of second round of reviews (if needed) – June 1st, 2019
- Special issue completed – July 31st, 2019

Papers will be reviewed on a first-come-first-served basis in the open window (August 15th, 2018 - February 15th, 2019)
Summer Meetings

- 2019 - ISTTT 23 (Lausanne, Switzerland)
- 2020?
  - Midyear meeting at AVS 2020?
  - Please send me your proposal
  - Will discuss and vote during committee meeting in January 2019
Liaison with Other Committees

- Highway Capacity Quality of Service Committee (AHB40)
  J. Sturrock/M. Hadi

- Task Force on System Simulations (AHB80T)
  R. Bertini/J. Sturrock/R. Cunnard
New Business
TRB will celebrate its 100th anniversary in 2020. The Technical Activities Council and the Centennial Task Force invite all committees to submit a Centennial Paper as part of the celebration. This is a great opportunity for each of our standing committees to showcase the committee’s past accomplishments and contributions to transportation, demonstrate the committee’s current relevancy and activities, and consider the committee’s role in meeting future challenges and opportunities. Centennial Papers will be featured on the Centennial website.
Timeline

- **February 1, 2019:** Draft paper due to the committee’s TRB Staff Officer
- **March 1, 2019:** Staff Officer comments / edits due to Committee
- **May 1, 2019:** Final paper due to Staff Officer
- **June 1, 2019:** Final paper due to website content manager
- **Summer 2019:** Centennial website launch

Volunteers?
New Business

- Any other?
Adjourn

Please don’t forget to sign in!