



Welcome to ACP50 Committee on Traffic Flow Theory and Characteristics

January 11th, 2022



Housekeeping

- Please sign on paper (in person attendees) or through the google sheet (in person and online attendees)!
 - For online attendees, please mute yourself. Only questions in the chat will be considered.
 - Will skip self-introduction; Please introduce yourself when you speak
 - A electronic vote has been organized among the committee in December to approve the minutes of 2021 annual and summer meetings. The final versions are available on the website.
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Agenda



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- | | |
|-------------------------------------|----------------------|
| ▪ Welcome and Call to Order | L. Leclercq |
| ▪ Chair Report | L. Leclercq |
| ▪ TRB Report | R. Cunard/R. Bertini |
| ▪ FHWA Programs & Activities | J. Sturrock/R. James |
| ▪ Membership | L. Leclercq |
| ▪ TFTC Subcommittee Reports | |
| ▪ Liaison with other Committees | All Attendees |
| ▪ International Liaison | All attendees |
| ▪ Announcements and Future Meetings | All Attendees |
| ▪ New Business | All Attendees |
| ▪ Adjourn | All Attendees |
-



Chair Report



Subcommittee Meetings

Tuesday, January 11
6:00 PM-
7:30 PM ET

Simulation Subcommittee (SimSub), ACP80(1), Joint Subcommittee of ACP80, ACP20, ACP25, ACP35, ACP40, ACP50, ACP55, AEP40, AMS10

Christopher Melson, Louisiana Department of Transportation and Development, presiding
John Shaw, Iowa State University, presiding
Operations and Traffic Management, Planning and Forecasting, Environment

[More Details](#)

[ACP80](#) [ACP20](#) [ACP25](#)
[ACP35](#) [ACP40](#) [ACP50](#)
[ACP55](#) [ACP80\(1\)](#) [AEP40](#)
[AMS10](#)

Tuesday, January 11
1:30 PM-
3:00 PM ET

Traffic Flow Modeling for Connected and Automated Vehicles Subcommittee, ACP50(3)

Samer Hamdar, George Washington University, presiding
Operations and Traffic Management

[More Details](#)

[ACP50](#) [ACP50\(3\)](#)



Chair Report



Lectern Session

Lectern Session 1394

Wednesday, January 12
10:30 AM-
12:00 PM ET

Global Overview of Recent Advances in Traffic Flow Theory

Ludovic Leclercq, Universite Gustave Eiffel, presiding

Lectern

Operations and Traffic Management

[More Details](#)

ACP50



Chair Report



Poster Sessions

Poster Session 1093

Monday, January 10
10:30 AM-
12:00 PM ET

Traffic Flow Theory, Part 1: Network Modeling and Control (Part 2, Session 1178; Part 3, Session 1337; Part 4, Session 1371)

Samer Hamdar, George Washington University, presiding

Poster

Operations and Traffic Management

[More Details](#)

ACP50

Poster Session 1178

Monday, January 10
4:00 PM-
5:30 PM ET

Traffic Flow Theory, Part 2: Connected and Autonomous Vehicles (Part 1, Session 1093; Part 3, Session 1337; Part 4, Session 1371)

Nikolas Geroliminis, Ecole Polytechnique Federale de Lausanne (EPFL), presiding

Poster

Operations and Traffic Management

[More Details](#)

ACP50

Poster Session 1337

Tuesday, January 11
4:00 PM-
5:30 PM ET

Traffic Flow Theory, Part 3: Lane Changing and Link Models (Part 1, Session 1093; Part 2, Session 1178; Part 4, Session 1371)

Soyoung Ahn, University of Wisconsin-Madison, presiding

Poster

Operations and Traffic Management

[More Details](#)

ACP50



Chair Report



Poster Sessions

Poster Session 1371

Wednesday, January 12
8:00 AM-
9:30 AM ET

**Traffic Flow Theory, Part 4: Intelligent Transportation Systems and Network Optimization
(Part 1, Session 1093; Part 2, Session 1178; Part 3, Session 1337)**

Vikash Gayah, Pennsylvania State University, University Park, presiding

Poster

Operations and Traffic Management

[More Details](#)

ACP50



Chair Report



Poster Sessions

Poster Session 1371

Wednesday, January 12
8:00 AM-
9:30 AM ET

**Traffic Flow Theory, Part 4: Intelligent Transportation Systems and Network Optimization
(Part 1, Session 1093; Part 2, Session 1178; Part 3, Session 1337)**

Vikash Gayah, Pennsylvania State University, University Park, presiding

Poster

Operations and Traffic Management

[More Details](#)

ACP50



Some insights from the chairman meeting

- TRB is very focused on diversity, inclusion and equity
 - A important step is to update your myTRB account to reflect your category
 - Key issues as we begin 2022
 - Changing travel patterns and demand
 - Supply chain disruptions
 - Transportation's role in addressing climate change
 - Implementation of the Bipartisan Infrastructure Law
 - Dealing with significant transportation-related equity issues
 - Rapid changes occurring as a result of technology advances
 - Shortages of transportation workers
 - Safety-related trends that are headed in the wrong direction
-



Feedback to TRB International Coordinating Council



- TRB has identified 12 critical issues. Any ideas about how our committee can contribute? => send an email to gayah@engr.psu.edu
 - Serving a Growing and Shifting Population.
 - Energy and Sustainability.
 - Resilience and Security.
 - Safety and Public Health.
 - Equity.
 - Governance.
 - System Performance and Asset Management.
 - Funding and Finance.
 - Goods Movement.
 - Institutional and Workforce Capacity.
 - Research and Innovation.



TRB Report



- Rich Cunard
 - Robert Bertini
-



U.S. DOT/FHWA Report



- Jim Sturrock
 - Rachel James
-



Membership



- Member rotation due for Feb, 15th, 2022
 - I am working on it...
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Subcommittees



1. Connected Automated Vehicles ACP50(3) Hamdar
2. Research Problem Statements Gayah
3. Paper Review Leclercq
4. Awards Menendez/Leclercq
5. Mid-Year Meetings Leclercq
6. Outreach and Diversity
 - Committee Communications Talebpour
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Meeting



ACP50(3): Connected and Automated Traffic Flow (CAT-Flow) Subcommittee

Report

Traffic Flow Theory and Characteristics Committee (ACP 50)

Transportation Research Board Annual Meeting

Washington, DC

January 2022



Connected and Automated Traffic Flow (CAT-Flow) Subcommittee – ACP50 (3)



TRB January 2022 Paper Handling:

- 17 handled by ACP50-3 directly – 8 Recommended and 9 Rejected
- 2 Recommended for Lectern and 6 Posters
- 5 Papers Submitted for Publication and Presentation
- 3 Current Papers Reviewed for Publication at TRR

Thank you for CAT-Flow members and friends for your reviews – please continue engaging us and supporting us with your time and responsiveness





Connected and Automated Traffic Flow (CAT-Flow) Subcommittee – ACP50 (3)



Webinar Series:

- Starting with ACC ACC initiative/Webinar Series:
 - July 29th, 11 AM EST: Dr. Christine Buisson.
 - Aug 5th, 11 AM EST: Dr. Michalis Makridis.
 - Aug 26th, 11 AM EST: Dr. Yang Zhou
 - September 24th, 11 AM EST: Mr. Tienan Li.
 - October 29th, 11 AM EST: Dr. Dionysis Theodosis.
 - November 7th, 11 AM EST: Dr. Vincenzo Punzo.
 - November 12th, 10 AM EST: Dr. Meng Wang.
 - November 19th, 10 AM EST: Dr. Wenlong Jin.

(Videos recorded and posted on YouTube)

Future speakers include Dr. Alireza Talebpour and Mr. Hao Zhou, for whom the schedules are to be announced.





Connected and Automated Traffic Flow (CAT-Flow) Subcommittee – ACP50 (3)



Webinar Series (cont'):

- More speakers are welcomed
(<https://sites.google.com/view/acresources/webinars?authuser=0>)
- Future Topics: Lane-Changing/Platooning/Safety/Experiments/Lane-Changing/Cybersecurity and Connectivity
- Contact: Danjue Chen (danjue_chen@uml.edu).

Home Worldwide ACC datasets Research f

SCHEDULE
July 29th, 11 AM EST: Dr. Christine Bulisson. https://bluejeans.com/1280718337 .
Aug 5th, 11 AM EST: Dr. Michalis Makridis. https://bluejeans.com/1280718337 .
Aug 26th, 11 AM EST: Dr. Yang Zhou. https://bluejeans.com/1280718337 .
October 15th, 11 AM EST: Drs. Vincenzo Punzo and Biagio Ciuffo and Biagio Ciuffo. https://bluejeans.com/1280718337 .

Future speakers include Tienan Li and Hao Zhou, for whom the schedules are to be announced.





Connected and Automated Traffic Flow (CAT-Flow) Subcommittee – ACP50 (3)



- **Subcommittee Expanded 1st (Summer) Meeting:**
 - Friday August 27, 10 AM US Eastern Time
- **Subcommittee TRB 2022 Meeting:**
 - Tuesday January 11, 2022, 1:30 PM – 3 PM, Washington Convention Center, Room 204
 - Task Groups Discussion, Future Webinar Topics, Data Collection Presentations for Possible Data-Hub Sharing
 - Webex Meeting Link:
 - <https://gwu.webex.com/j.php?MTID=mf7963c3ac7dd7d631f446b10dfc6bcff>
 - Meeting number: 2621 662 0956; Password: unAG4P76PhZ





Connected and Automated Traffic Flow (CAT-Flow) Subcommittee – ACP50 (3)



Miscellaneous:

- Website: <https://tftcav.seas.gwu.edu>
- Expanded List of Members and Friends: 50+
- Possible Joint Sponsorships: ACP80, ACP 40

.... moving forward

Special Thanks to:

- Sue Ahn, Mark Brackstone, Simeon Calvert, Danjue Chen, Ludovic Leclercq, Michael Levin, Xiaopeng Li, Alireza Talebpour, , Dan Work, Zuduo Zheng
- All young members joining and volunteering





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-



Committee Research Coordinator Update

- Research Needs Statements – Ideas for potential NCHRP projects
 - Submitted 1 in 2019, 1 in 2020
 - Would like volunteers (particularly those working with state DOTs) to help write statement for 2022 (Due Nov 1)
 - Please contact Vikash (gayah@engr.psu.edu) if interested
 - Great opportunity for younger members to get involved if working in this area
 - Synthesis topics – Ideas for potential NCHRP Synthesis projects
 - Submitted several during last three years
 - Would like volunteers to help write statements for new topics (Due Feb 2022)
 - Please contact Vikash (gayah@engr.psu.edu) if interested
-



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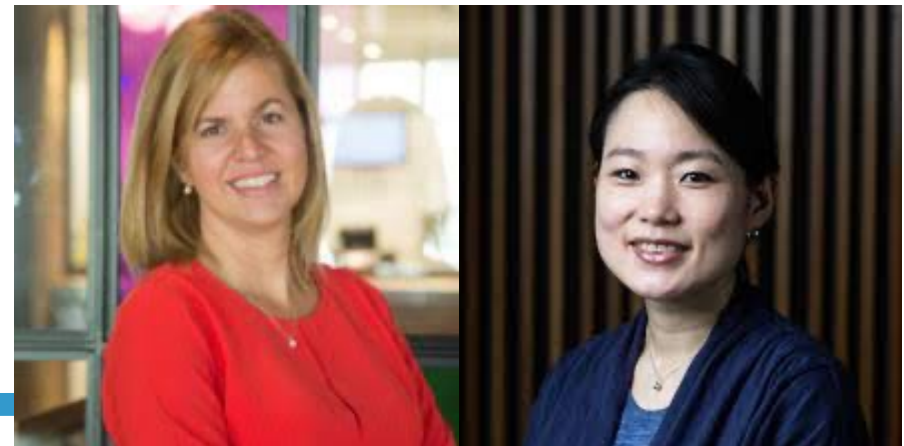


Paper Review & Sessions

Many thanks to subcommittee members, authors and reviewers!



Special recognition for our new subcommittee members!





Review Timeline

Dates	Process	Review Outcome
Aug 1	Papers due	
Aug 18	Review Assignment	Please 'accept/decline' review invitations!
Sept 15	Reviews due	
Oct 1-15	1st round decision	Presentation: Accept, Reject Publication: Reject or Moved to Editorial Review

Review process after moved to editorial review

- Assigned to an Associate Editor and then a Handling Editor
- A handling editor may invite additional reviewers or make a decision (accept, revise, reject)



Paper Review Statistics

Annual Meeting	2022	2021	2020	2019	2018	2017	2016	2015	2014
Papers Received	140	109	194	196	194	207	173	201	195
Percent increase	28%	-44%	-1%	1%	-6%	20%	-14%	4%	13%
Presentation only	94	61	93	80	64	67	54	48	32
Publication only	x	0	0	0	4	1	2	4	3
Present and publish	48	48	101	116	126	139	117	149	160
Submitted Presentation	140	109	194	196	190	206	171	197	192
Lectern Sessions	1	1	5	5	5	6	6	6	5
Lectern Papers	6	4	25	25	25	30	31	27	23
Poster Sessions	4	4	5	5	4	4	3	2	2
Poster Papers	75	61	86	84	84	84	71	80	84
Subtotal	81	65	111	109	109	114	102	107	107
Percent Accepted	58%	60%	57%	56%	57%	55%	60%	54%	56%
Rejected	59	44	83	87	81	92	70	90	85



Paper Review Statistics



Submitted Publication	46	48	101	116	129	140
Editorial Review	14	15	32			
Accepted (1st & 2nd round)			?	4	0	0
Revise and Re-review				19	34	35



Best Reviewer award



Congratulation to

S. Ilgin Guler

The Pennsylvania State University



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Some insights

We are currently working on the 2022 award season!

- 5 awards are discussed within the committee
- The Theoretical Award has been named “Nathan Gartner” to honor all his work for the committee and contributions to our profession
- Please mention your status (Msc., PhD student,...) on the front page! Also mention if the paper is eligible for the Burggraf award!
- Many of the papers submitted for publication in TRR have a young author as the first author (they in theory qualify for the Cunard award)
- Award subcommittee: Rob Bertini, Jiwon Kim, Monica Menendez, Sue Ahn



2023 Award process

- A new process for the committee-related awards will be tested in 2022 for the 2023 papers:
 - Papers will be reviewed in Oct, 2022 based on the paper review committee inputs
 - Potential recipients will be contacted to know if they are ready to submit their papers to TRR
 - We will discuss with TRR to see if a fast-track to publication is possible
-



D. Grant Mickle Award

- Established 1976
 - Outstanding paper published in the field of operation, safety, and maintenance of transportation facilities.
 - Honors fifth executive director, later 33rd Executive Committee Chair
 - There was no nomination this year.
-



Fred Burggraf Award



- Established 1966
- Stimulate and encourage young researchers
- Recognition of excellence in transportation research by researchers 35 years of age or younger whose papers have been published under the sponsorship of any Division A Standing Group
- Accompanied by a cash prize
- Honors TRB director from 1951-1964

- There was no nomination this year.



Cunard Award

- Stimulate and encourage young researchers
- Best 1st Young Author Paper in the area of Operations (first author 35 years of age or younger)
- The paper nominated this year won (again) the Cunard Award!



21-03221: Examining Freeway Bottleneck Features During A Mass Evacuation

by Brian Staes, Robert L. Bertini, Nikhil Menon, Eren Yuksel



Greenshields Prize



-
- Recognizes the use of empirical data for understanding traffic phenomena
 - Award is given within the Traffic Flow Theory committee

 - There was no award this year.
-



Nathan Gartner Award

- Recognizes theoretical papers with significant methodological contributions
- Award is given within the Traffic Flow Theory committee

21-00479: Replicating Microscopic Fundamental Diagram in Five Minutes
by *Daiheng Ni*



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Mid-Year Meetings



- 2007 ISTTT London, UK (in pub)
- 2008 Greenshields Symposium, Woods Hole, Massachusetts
- 2009 ISTTT Hong Kong, China (lunch table)
- 2010 Does Traffic Data Support Traffic Models? Annecy, France
- 2011 ISTTT Berkeley (one hour w/SimSub)
- 2012 Joint Summer Meeting with HCQS Committee, Fort Lauderdale, Florida
- 2013 ISTTT, Noordwijk, the Netherlands
- 2014 Portland, Oregon, USA, Symposium Celebrating 50 Years of Traffic Flow Theory
- 2015 ISTTT Kobe, Japan
- 2016 Sydney, Australia
- 2017 ISTTT Chicago
- 2018 Woods Hole, Massachusetts
- 2019 ISTTT Lausanne, Switzerland
- 2020 Amsterdam, the Netherlands (postponed) – Zoom meeting
- 2021 ISTTT Beijing, China (postponed) – Zoom meeting
- 2022 ISTTT Beijing, China ?
- 2023 ?
- 2024 ISTTT Santagio
- 2025 Start making plan!



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Annual Report



ACP50 Outreach and Diversity Subcommittee

Transportation Research Board 2021 Annual Meeting
January 2022



Outreach and Diversity Subcommittee

- Newsletter (<http://tftcnews.blogspot.com/>): 12 issues with each issue corresponding to one month (student volunteer: Mohaiminul Haque)
 - YouTube Channel (<https://www.youtube.com/user/AHB45/feed>) – Interviews will resume after pandemic
 - Social Media: Facebook Page and Twitter
 - ACP50 Journal Club – Started in December 2021 and will resume in February 2022.
 - Target Group: All are welcome, especially graduate students and young professionals
 - Please consider encouraging your students to participate
 - ACC Webinar Series (Danjue Chen and Hao Zhou)
 - ACP50 Integrating Channel: www.trafficflowchannel.org (under construction – Samer Hamdar & Mohaiminul Haque)
-



Outreach and Diversity Subcommittee



- Special Thanks to:
 - Samer Hamdar
 - Jorge Laval
 - Danjue Chen
 - Mohaiminul Haque
 - Hao Zhou
 - Alireza Talebpour
 - (All TFTC contributors and readers)

Transportation Research Board
Traffic Flow Theory and Characteristics
Committee—ACP 50

Newsletter



Volume 9, Issue 10
December 2021

EVENTS/ANNOUNCEMENTS

Covid-19 Pandemic Resources

The entire world is now focusing on Covid-19 Pandemic. We are living in a very difficult time. The virus has surprised almost all sectors of our societies. Our thoughts are for those who are affected by the virus. We are grateful to the public health professionals and other professionals who are helping us to fight against this invisible enemy. To learn about the symptoms of the virus and play your part in this fight, please visit [CDC Covid-19 Webpage](#).

Letter from the Chair of the ACP50 Committee

Dr. Ludovic Leclercq, the Chair of the ACP50 Committee has sent a open letter to the ACP50 Family and friends. He wishes everyone a happy new year and shares important information regarding the TRB Annual Meeting 2022. Please [visit this link](#) to access the full letter.

Traffic Flow Theory and Characteristics Committee's (ACP50) Events Schedule at TRB 101th Annual Meeting

Event Name	Date, Time and Location
Poster Session 1093: Traffic Flow Theory, Part 1: Network Modeling and Control	Monday, January 10 10:30 AM-12:00 PM ET Convention Center, Hall A
Poster Session 1178: Traffic Flow Theory, Part 2: Connected and Autonomous Vehicles	Monday, January 10 4:00 PM-5:30 PM ET Convention Center,

Newsletter Spotlight

Covid-19 Pandemic Recourses.

Letter from the Chair of the ACP50 Committee

Traffic Flow Theory and Characteristics Committee's (ACP50) Events Schedule at TRB 101th Annual Meeting

Positions:

Department Head Position Open at NC State University.

Faculty Position open at University of Connecticut

Faculty Positions Open at Laboratoire Ingénierie Circulation Transport (LICIT)

Faculty Position open at TUM

Traffic in the Media:

Argo AI Focuses On Cyclist Identification For Automated Vehicles.



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Liaison with Other Committees

- Joint Subcommittee on Traffic Simulations ACP80(1) Melson / Shaw
 - Young Members Council
E. Gonzales
 - Highway Capacity Quality of Service Committee (ACP40)
J. Sturrock/Others?
 - Traffic Simulations Committee (ACP80)
?
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Joint Simulation Subcommittee

ACP80(1)

Sponsor Committees:

ACP50: Traffic Flow Theory and Characteristics

ACP80: Traffic Simulation

Co-Chairs:

Chris Melson (LTRC)

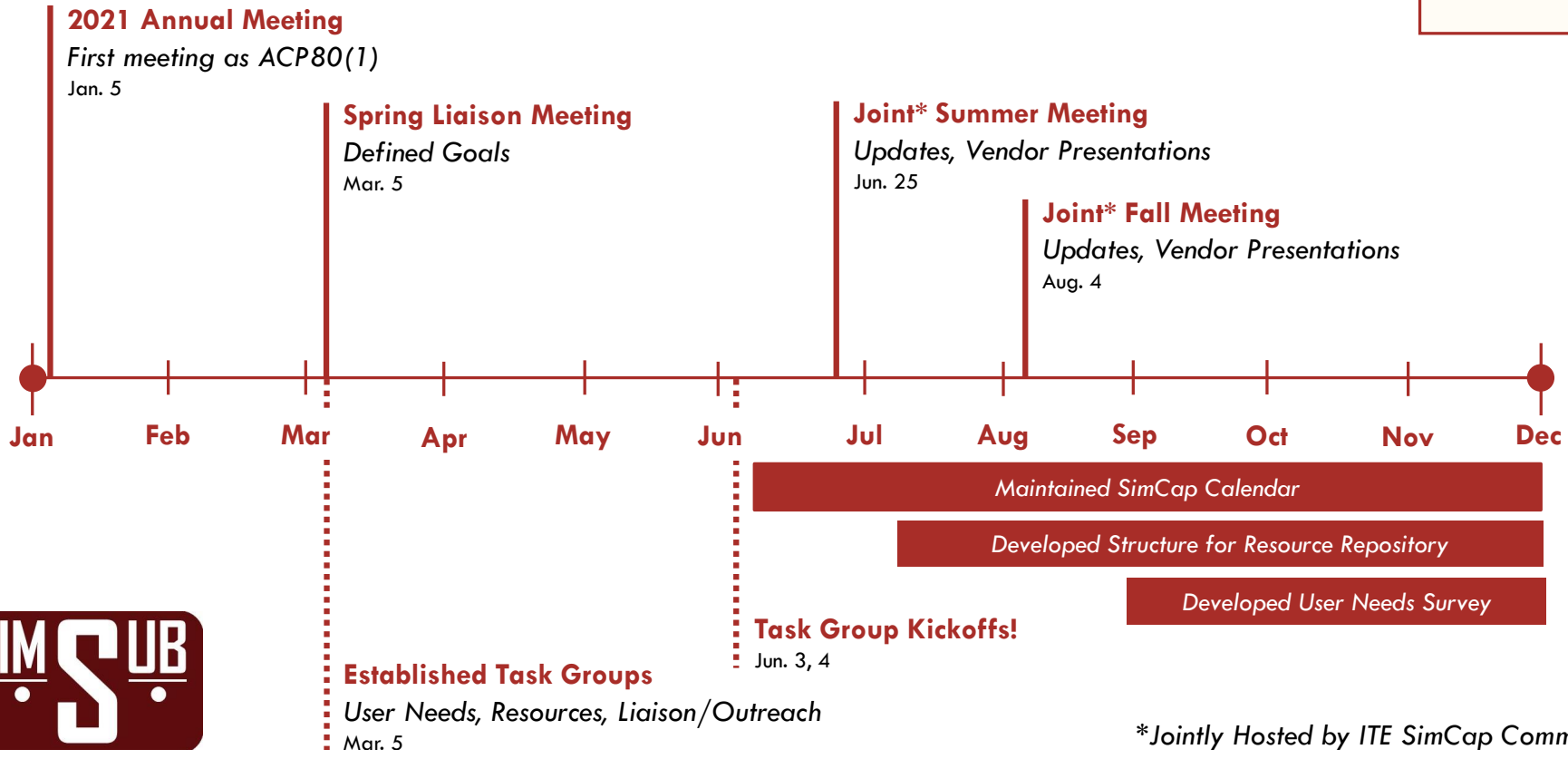
John Shaw (InTrans)





2021 In Review

simcap.eng.lsu.edu/simsub



*Jointly Hosted by ITE SimCap Committee



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New Business



- 2022 Annual Meeting Call for Papers (Due in May)
 - 2022 Workshop Proposals (Due in June)
 - Triennial Strategic Plan -> New subcommittee lead by Prof. S. Ahn (to be confirmed)
 - Creating new thematic subcommittees?
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Parting Thoughts...





Adjourn



Please don't forget to sign in!
