



CALL FOR SUBMISSIONS PROSPECTUS

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Help us highlight this year's theme, *Investing in Transportation: Building Canada's Economy*, in mind when developing submissions for 2017 TAC Conference.

IMPORTANT DEADLINES

KEY DATES	DEADLINE
Abstract submission*	January 16
Abstract response (accept/reject)	Sent out by February 27
Full submissions due*	April 21
Full submission response (accept/reject/request for revisions)	Sent out by June 19
Revised submissions due (if requested)*	July 21
Final presentations and posters due	September 15

**Authors not adhering to these deadlines will be dismissed from the call for submissions process.*

SUBMISSION GUIDELINES

Authors are invited to submit an abstract describing their presentation topic for a TAC conference technical session or poster. If the abstract is accepted, you will be asked to submit a [paper](#), a [draft presentation](#) or a [draft poster](#) for review. **If accepted, authors are expected to attend and present at the conference. All submissions, including the final presentation, become the property of the Transportation Association of Canada (TAC), which is entitled to publish them.**

- Submissions are reviewed for quality, format, and relevance to the session's topic, general interest. Submissions must be original or significantly different from any other that the author may have submitted to other organizations for presentation or publication. They should not favour special interests or be of a commercial nature. This stipulation also applies to oral presentations.
- **Only PDF and PowerPoint documents will be accepted.** All submissions should be named as follows: **LastNameFirstInitial–Version#**
- All session rooms will have a screen, projector, laptop, podium with microphone and a microphone at the front of the room for audience questions. Videos presented at the conference will not have audio (sound) available.
- Each speaker is given 20 minutes to present, plus 5-10 minutes for questions and discussion. However, your session chair or the conference program timing will confirm this.
- **Simultaneous interpretation** is available only in rooms where French authors are presenting. Authors have the option to present in English, French or both.
- **Program changes or additions** made (e.g. author, presenter, photo, biography) received after **August 1st** will not be included in the printed conference program. Changes or additions received after **September 10th** may not be included in the conference mobile application or online program. After this date, it is the presenters' responsibility to inform the session chair directly of any changes.
- All accepted **papers and posters** will be included in the Conference Papers section of TAC's website. **Presentations** will be available to conference delegates only, after the conference.
- Student Paper Awards are available to the top principal authors who are also registered as full-time students at a recognized post-secondary institution.

Questions?

Contact conference@tac-atc.ca.

TECHNICAL SESSIONS SEEKING SUBMISSIONS

Submit a 200- to 400-word abstract of your intended topic/presentation to apply to present in any of the sessions below. If your abstract is accepted, you are asked to next submit your choice of either a paper, a presentation or a poster on your topic, unless otherwise indicated in green below.

ORGANIZED BY: ASSET MANAGEMENT TASK FORCE

DEFINING, SETTING, AND MONITORING THE LEVEL OF SERVICE IN ASSET MANAGEMENT

- Methodology/case study in defining transportation level of service (LOS) – approaches, techniques, lessons learned
 - Obtain political and public buy-in/engagement and LOS targeting and monitoring approach
 - Strategies to define, monitor and report on quantitative and qualitative LOS measures
 - Describe the difference between client (transportation system user), technical, and activity-based LOS measures
 - Communicate your agency's LOS report card
 - Scenario-based forecasting of LOS
 - Calibrate LOS to accurately represent stakeholder value when using LOS scores to prioritize projects
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ORGANIZED BY: INTEGRATED COMMITTEE ON CLIMATE CHANGE

CLIMATE – HOW IS YOUR JURISDICTION/ORGANIZATION RESPONDING

- Transportation plays a critical role in the quality of life and movement of goods and people in Canada, and supports all sectors of the economy
 - In 2013, transportation accounted for 170 megatons, or 23%, of Canada's total greenhouse emissions, the second largest emitting sector after oil and gas
 - Impacts associated with climate change and extreme weather are affecting transportation systems, services and operations across jurisdictions
 - Explore initiatives to help the Canadian transportation sector meet its climate challenges, such as vulnerability assessment tools, clean energy technologies, research and development, and green infrastructure
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ORGANIZED BY: CONNECTED AND AUTOMATED VEHICLES WORKING GROUP

ADVANCEMENTS IN CONNECTED AND AUTOMATED VEHICLES

- Success story in CAV testing
- Manufacturer status update
- What's next?

ORGANIZED BY: EDUCATION AND HUMAN RESOURCES DEVELOPMENT COUNCIL

2017 TAC EDUCATIONAL ACHIEVEMENT AWARD NOMINATIONS

This session will feature a paper by the winner of TAC's 2017 Educational Achievement Award, as well as presentations by all other award nominees. (The [Call for Nominations](#) for the 2017 award is posted on the Association's website. Abstracts are required by December 12, 2016 and, if accepted, full submissions are due by March 3, 15:00 EST.)

ORGANIZED BY: ENVIRONMENT COUNCIL AND ENVIRONMENTAL ISSUES MANAGEMENT STANDING COMMITTEE

2017 TAC ENVIRONMENTAL ACHIEVEMENT AWARD NOMINATIONS

This session will feature a paper by the winner of TAC's 2017 Environmental Achievement Award, as well as presentations by all other award nominees. (The [Call for Nominations](#) for the 2017 award is posted on the Association's website. Abstracts are required by December 12, 2016 and, if accepted, full submissions are due by March 3, 15:00 EST.)

EMERGING ENVIRONMENTAL TECHNOLOGIES

- Increase awareness of new and emerging environmental technologies or design techniques that reduce the impact of highway projects on the environment
- Examples include erosion and sediment control products and techniques, wildlife monitoring, subsurface flow, road salt, and right-of-way maintenance techniques

THE GOOD, THE BAD, AND THE UGLY OF ROADSIDE FEATURES AND ECOLOGY

- Examples include wetlands in ditches, roadside corridors as pollinator habitat, riparian plantings, man-made bird and bat features, working around protected species, wildlife corridors/passage/accommodation, and road salt deposits as a wildlife attractant
 - Review challenges of balancing roadside maintenance with preserving environmental features/functions and how they have been overcome in different jurisdictions (wetlands in ditches and maintaining drainage, pollinator habitat and sightline safety, soft gravel shoulders as turtle habitat and grading operations to ensure shoulder safety, fostering bird/wildlife movements while maintaining driver and wildlife safety)
 - Explore policy approaches to coordinate and collaborate on solutions to ensure natural protection, and roadside function and safety
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ORGANIZED BY: GEOMETRIC DESIGN STANDING COMMITTEE

GEOMETRIC DESIGN – EMERGING ISSUES

**Papers are required*

- Focus on emerging geometric design issues facing practitioners
- Geometric design issues and solutions leading to better and safer roads

GEOMETRIC DESIGN – LESSONS LEARNED

**Papers are required*

- Focus lessons learned through ongoing practice of geometric design
 - Unique and innovative approaches to geometric design process resulting in better and safer roads
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ORGANIZED BY: MAINTENANCE AND CONSTRUCTION STANDING COMMITTEE

INVESTING IN ROAD CONSTRUCTION: BUILDING CANADA'S ECONOMY

- Road construction represents one of the largest expenditures for all Canadian jurisdictions
- Construction on our road infrastructure is inevitable and ranges from rehabilitation to new construction
- Jurisdictions and their service providers investing in existing infrastructure rehabilitation or new infrastructure construction to build Canada's economy
- Topics could include unique and innovative approaches to road construction
- Submissions should detail the initiative or objective, benefits gained, lessons learned and future directions

INVESTING IN SUMMER ROAD MAINTENANCE: BUILDING CANADA'S ECONOMY

- Canada's road infrastructure represents a huge investment for all Canadian jurisdictions
- Jurisdictions have made significant progress in maintenance practices and treatments and are striving to improve how to maintain road assets under constrained budgets
- Many innovations have been pursued and approaches to summer maintenance vary significantly across Canada
- Topics should showcase unique and innovative approaches on maintaining roads and highways through the summer months
- Submissions should detail the initiative or approach, benefits, lessons learned and future directions

INVESTING IN WINTER ROAD MAINTENANCE: BUILDING CANADA'S ECONOMY

- Canada's winter climate presents some of the harshest environments in the world
- Transportation authorities have made significant investments in the past and are constantly striving to improve
- Many innovations have been pursued and approaches to winter maintenance vary significantly across Canada
- Topics should showcase unique and innovative approaches on maintaining roads and highways through the winter months
- Submissions should detail the initiative or approach, lessons learned and future directions

ORGANIZED BY: PUBLIC UTILITIES MANAGEMENT SUB-COMMITTEE OF THE MAINTENANCE AND CONSTRUCTION STANDING COMMITTEE

UTILITIES MANAGEMENT

- Innovations in utility engineering (mapping, coordination, and design) to meet the needs of building Canada's economy through investment in transportation
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ORGANIZED BY: PAVEMENTS STANDING COMMITTEE

INNOVATIONS IN PAVEMENT MANAGEMENT, ENGINEERING AND TECHNOLOGIES

**Papers are required*

- Innovative designs, tools, techniques or technologies applied to pavement management or pavement engineering
- Case studies presenting projects involving unique challenges in pavement management or engineering

***Depending on the number of papers submitted, some may be moved to a poster session. Those presented as poster sessions still require a full paper.*

ORGANIZED BY: ROAD SAFETY STANDING COMMITTEE

2017 TAC ROAD SAFETY ENGINEERING AWARD NOMINATIONS

This session will feature a paper by the winner of TAC's 2016 Road Safety Engineering Award, as well as presentations by all other award nominees. (The [Call for Nominations](#) for the 2017 award is posted on the Association's website. Abstracts are required by December 12, 2016 and, if accepted, full submissions are due by March 3, 15:00 EST.)

HUMAN FACTORS AND ROAD SAFETY CULTURE

- Traffic safety culture
- Vision zero: international efforts and transferability in the Canadian context
- Distracted and impaired road users

IMPROVING ROAD SAFETY IN RURAL AREAS

- Safety issues associated with two-lane rural roads
- Applying safety principles to highway design
- Safety of barriers (none, cable, beam, etc.)
- Animal crossings

IMPROVING ROAD SAFETY IN URBAN AREAS

- Measures to improve vulnerable road user safety to encourage active transportation
- Facility design to accommodate the special needs of older and younger pedestrians
- Road diets, complete streets, shared spaces, and transit related issues
- Maintenance of sidewalks and bicycle facilities

- Education / comprehension of new traffic control devices (e.g. signs, pavement markings)

INNOVATIONS IN ROAD SAFETY

- Recent research using driving simulators at Canadian universities
- Application of simulation tools to enhance safety
- Connected and autonomous vehicles
- Innovations in intersection / interchange / roundabout design
- Use and calibration of safety prediction models

MANAGING SPEED TO IMPROVE SAFETY

- Speed management in residential neighborhoods
- Safety evaluation of traffic calming and speed management measures
- The relationship between design speed and safety
- Evaluations of variable speed limits

ORGANIZED BY: SOILS AND MATERIALS STANDING COMMITTEE

ADVANCED TESTING AND MODELING OF ROAD AND EMBANKMENT MATERIALS

**Papers are required*

- Innovative testing and modeling of embankment and road materials, including unbound and bound soil, geosynthetics, and bituminous and Portland cement based materials
- Estimation models for mechanical properties of pavement materials
- Assessment and use of frost and moisture susceptibility
- Seasonal variation mechanical properties of soil and pavement materials
- Case studies summarizing road and/or embankment construction projects with challenges and respective solutions applied
- Lessons learned from difficulties encountered in road and/or embankment construction
- Long term performance evaluations of road and/or embankments and lessons learned

GREEN TECHNOLOGY IN GEOTECHNICAL AND MATERIALS ENGINEERING

**Papers are required*

- Recycling and incorporating recycled materials
- Alternative materials for road construction
- Energy and CO2 emissions reductions through innovative use/design of materials
- Durable construction materials that increase design life
- Field performance of products/methods using recycled materials vs traditional materials

INNOVATION IN GEOTECHNICAL AND MATERIALS ENGINEERING

**Papers are required*

- Advancements in design and construction of road and bridge embankments
- Climate change considerations for geotechnical and pavement materials engineering
- Trenchless technology in constructing new infrastructure under existing roadways
- Remote sensing and drone use for geotechnical engineering

ORGANIZED BY: STRUCTURES STANDING COMMITTEE

STRUCTURES

- Bridge Structures: Planning, Design, Construction, Management, Materials
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ORGANIZED BY: SUSTAINABLE TRANSPORTATION STANDING COMMITTEE

2017 TAC SUSTAINABLE URBAN TRANSPORTATION AWARD NOMINATIONS

This session will feature a paper by the winner of TAC's 2017 Sustainable Urban Transportation Award, as well as presentations by all other award nominees. (The [Call for Nominations](#) for the 2017 award is posted on the Association's website. Abstracts are required by December 12, 2016 and, if accepted, full submissions are due by March 3, 15:00 EST.)

COMPLETE STREETS – MEASURING THE SUCCESS: TRAVEL, DEVELOPMENT, ECONOMIC CRITERIA AND MORE

- Many complete streets have now been implemented in Canada. With projects being completed, how has travel been impacted and has development changed as a result?
- How are we measuring the success, failure and challenges) of projects? What has been learned? What do cities and communities considering complete streets need to know about monitoring and measuring success?

CYCLING IN CANADIAN COMMUNITIES: FROM PLANNING TO IMPLEMENTATION

- Current practices in bicycle facility and network implementation
- Projects and policies that help attract residents to cycling
- Lessons learned in implementing cycling facilities and promotion projects

EMERGING ISSUES IN URBAN TRANSPORTATION: THE PROMISE AND PERILS OF NEW MOBILITY

- Explore the future of "new mobility" in Canadian urban areas – what it means for governments, businesses and travelers
 - Speakers are asked to paint a picture of what the next decade could bring
 - Topics include autonomous vehicles, mobility-as-a-service solutions, on-demand transit services, car and bike sharing, ride-hailing and ridesharing applications, multimodal travel planning, first-mile and last-mile solutions, and mobility pricing
-

ORGANIZED BY: SUSTAINABLE TRANSPORTATION STANDING COMMITTEE AND SMALL MUNICIPALITIES TASK FORCE

SUSTAINABLE TRANSPORTATION IN SMALLER MUNICIPALITIES

- Interesting examples of applying sustainable transportation principles in the context of smaller communities

- Broad themes may address implementation of complete streets, active transportation, vulnerable road user safety, transit, transportation demand management, or integration of land use and transportation
 - Topics include Trans-Canada Trail: connecting active transportation from coast to coast; accommodating vulnerable road users around highways through small municipalities; or providing affordable and safe transportation alternatives to personal vehicles
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ORGANIZED BY: TRANSPORTATION PLANNING AND RESEARCH STANDING COMMITTEE

BEST PRACTICES IN URBAN TRANSPORTATION PLANNING

- Best practices and innovations in urban transportation corridor planning and management
- Best practices and innovations in urban transportation master planning
- Best practices and innovations in transit planning

GOODS MOVEMENT

- Examples of best safety practices in goods movement by all modes – trucks, rail, air, marine and pipelines for moving goods safer, faster and better
- Optimizing use of existing transportation infrastructures and making targeted investments and regulations for improved safety
- Need to develop safe and innovative solutions by improving current data collection practices, policies and regulations
- Achieving safety successes through public/private partnerships and innovations
- Effective integration with land use planning and community building initiatives
- Improved safe and efficient supply chain and logistics practices for meeting needs of public and private sector partners in context of Canadian and global economies

TRAVEL DEMAND MODELING: APPLICATIONS FOR TRANSPORTATION INVESTMENT AND ECONOMIC DEVELOPMENT

- New trends in travel demand modeling
 - Using travel demand models to plan investments in transportation
 - New or interesting applications of travel demand modeling
 - Travel demand modeling contributions and implications for economic development
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ORGANIZED BY: TRAFFIC OPERATIONS AND MANAGEMENT STANDING COMMITTEE

BUILDING TOMORROW'S TRAFFIC CONTROL DEVICES

- Creating and upgrading traffic control devices for electrification
- Intelligent traffic control for connected vehicles
- The challenges of integrating autonomous vehicles
- How to provide public parking for shared vehicles (bikes or cars)

INVESTING IN VISIONZERO

- What is “VisionZero” / concept and philosophy
- Where/when/how to invest in traffic operations to adhere to VisionZero
- Working VisionZero into guidelines

PUTTING BIG DATA TO WORK – A RETURN ON INVESTMENT

- Applications for big data collected
- Improving commuting and mobility through big data
- Smart cities achievements

POSTER SESSIONS SEEKING SUBMISSIONS

Submit a 1000-word abstracts of your intended topic/poster. If your abstract is accepted, **you are next asked to submit a draft poster for review**. If accepted, authors submit a final poster to be displayed at the conference.

ORGANIZED BY: GEOGRAPHIC INFORMATION SYSTEM – TRANSPORTATION SUBCOMMITTEE OF THE ASSET MANAGEMENT TASK FORCE

GEOGRAPHIC INFORMATION SYSTEMS (GIS) IN TRANSPORTATION

- Innovation use of GIS in transportation
 - Best practices using GIS in transportation
 - The future of GIS use in transportation
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ORGANIZED BY: STRUCTURES STANDING COMMITTEE

STRUCTURES

- Bridge Structures: Planning, Design, Construction, Management, Materials

PANEL DISCUSSIONS

Panel discussions begin with invited presentations and are followed by exchanges and debate among panel and audience members. Papers are not solicited for panel discussions. Speakers are invited by organizers to take part in panel discussions and will be given the opportunity to submit written papers for inclusion in the conference proceedings. Papers must be submitted by September 1, 2017 and must be approved by the panel's organizer.

ORGANIZED BY: CONNECTED AND AUTOMATED VEHICLES WORKING GROUP

ROAD INFRASTRUCTURE TO SUPPORT CONNECTED AND AUTOMATED VEHICLES

- Changes to roadway design and traffic control to support CAVs
 - Implications on parking, railway crossings and construction zones
 - How to manage mixed modes of travel (pedestrians, cyclists and conventional vehicles)
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ORGANIZED BY: EDUCATION AND HUMAN RESOURCES DEVELOPMENT COUNCIL

BREAKING THE BARRIERS – UNDERSTANDING AND APPRECIATING DIFFERENT STAKEHOLDER VIEWS

- **Brief role playing session** presenting typical communication/accountability issues among various stakeholders
 - **Group discussion** among participants to propose solutions with all parties to converge toward an integrated solution
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- **Panel discussion** with a group of experts to review the efficiency and viability of participant solutions

MENTORING – PAVE A PATH FOR CANADIAN AND FOREIGN ENGINEERS FOR ADVANCEMENT AND SUCCESS

- The transportation industry needs more people in the profession to backfill the positions being left vacant by retiring baby boomers. There is also a need to make sure these individuals are well qualified to take over and to fulfill that demand
- The panel session will look at how the industry across Canada in private and public sectors can benefit from providing mentoring to Canadian and foreign-trained engineers so they may position themselves for professional and organizational growth
- The panel will share the experiences of leading organizations on a variety of mentoring methodologies/practices which have proven to be successful in providing opportunities for development, networking and mutual collaboration
- The panel will also share their experiences about the importance of providing mentorship to new immigrants who want to upgrade their education and experience so that they can successfully enter Canada’s transportation sector

TECHNICAL EXPERT TO MANAGER – TIPS ON SUCCESSFULLY NAVIGATING THE TRANSITION

- New managers are moving from operating and being recognized as technical experts to developing skills of others
- Organizations tend to promote engineers to director positions based on technical skills, but leadership positions require different skills
- New managers need tools to develop skills in people management; conflict resolution; office politics; influencing others; delegating; motivating, coaching, and communicating; discipline, and recruitment
- This panel will focus on difficulties a new manager can experience when promoted from a technical position to a leadership role
- A successful transition can be accomplished by:
 - focusing on early wins to keep the team motivated as you develop management skills
 - getting to know the team members individually
 - staying away from becoming too involved in technical work
 - finding a mentor

ORGANIZED BY: GEOGRAPHIC INFORMATION SYSTEM – TRANSPORTATION SUBCOMMITTEE OF THE ASSET MANAGEMENT TASK FORCE

REFERENCING THE LOCATION OF ROAD INVENTORY ASSETS

- Is it worth the effort to augment your road inventory so that assets can be referenced spatially AND linearly?
- Best practices in location referencing
- Future trends in location referencing

ORGANIZED BY: ROAD SAFETY STANDING COMMITTEE

APPLICATIONS OF DRONES IN TRAFFIC ENGINEERING

- What are drones and their characteristics?
 - Legal considerations for using drones
 - Examples of applications of drones in traffic engineering
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ORGANIZED BY: SMALL MUNICIPALITIES TASK FORCE

INVESTING IN TRANSPORTATION FOR SMALL MUNICIPALITIES

- Funding Investments:
 - Prioritizing investments in small municipalities with limited funding
 - Where does the funding come from
 - Partnerships
- Types of Investments:
 - Speed limits in rural areas
 - Implementation of PXOs
 - Active transportation (directional signs, facilities, markings)
 - Intelligent transportation systems for small municipalities
 - Shared spaces
 - Understanding the impacts of high traffic railroad grade crossings
 - School travel planning in small municipalities

TRANSPORTATION INNOVATION FOR SMALL MUNICIPALITIES

- The focus of this panel discussion includes:
 - Unique funding models used in small municipalities
 - Dynamic and innovative solutions to transportation issues
 - "Big City" solutions in small municipalities
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ORGANIZED BY: TRAFFIC OPERATIONS AND MANAGEMENT STANDING COMMITTEE

ACTIVE TRANSPORTATION: HOW TO MAKE SURE GUIDELINES WALK HAND IN HAND WITH LEGISLATION

- Challenges of adapting guidelines to rules of the road, and vice-versa
- Getting unlicensed, untrained non-motorized users to follow the rules
- Success stories and / or case studies

WORKSHOPS

Workshops provide an opportunity for in-depth discussion and learning on topics of interest. They include opening presentations or remarks; invited speakers or keynote presentations; roundtable discussions; roundtable summary reports and closing remarks. Papers are not solicited for workshops. Speakers are invited by organizers to take part in workshops and will be given the opportunity to submit written papers for inclusion in the conference proceedings. Papers must be submitted by September 1, 2017 and must be approved by the workshop's organizer.

ORGANIZED BY: CONNECTED AND AUTOMATED VEHICLE WORKING GROUP

DIGITAL INFRASTRUCTURE TO SUPPORT CAVs

- Connecting vehicles to traffic systems, V2V, V2I
 - Available and new data sources
 - Security of data and communication networks
 - Technologies to support CAVs
-

ORGANIZED BY: ROAD SAFETY STANDING COMMITTEE

ROAD SAFETY IN WORK ZONES

- The best practices in improving road safety in work zones
- Improving safety under geometric constraints
- Road safety audit of work zones
- Hands-on practices in design and audit of work zones