

The Conduit of Research

ISSUE 10

WINTER 2008

INSIDE THIS ISSUE:

- Does It Matter
What's Driving
"Us"? 1
- Tips for Review-
ing a Technical
Paper 1
- Mark Norman—
Distinguished
Service Award 2
- Funding Sources
for Transporta-
tion Programs 4
- From the Chair 5
- CoR at TRB 5
- Upcoming Events 5
- Member Profile 6
- TRB & Other
Related News 7
- Membership 8

Edited by:
Hau Hagedorn
OTREC

Does It Matter What's Driving "US"? By Monique Evans

Further reflections on the Transportation Research Program Administration (TRPA) International Scan. The TRPA International Scan was a whirlwind tour of innovative transportation research management practices

from around the globe. The scan team visited Sweden, The Netherlands, Belgium, France, Japan and South Korea and explored topics ranging from agenda setting and partnership models to the actual conduct of research and implementation of the results. High level

goals and objectives of numerous programs as well as detailed process information were presented by all of the host countries. We were given so much information that it was sometimes a challenge to synthesize it all. But we gave it our best shot because we were committed to finding new ways to improve the overall effectiveness of public sector research programs and to maximize the use of program resources in the US. At the beginning of the trip I almost expected to discover some revolutionary approach that would drastically change the way we do business, but as we met with managers from the different countries I was surprised to see that we shared many of the same challenges, expectations, and even some of the same management processes. There were also some notable differences, but for me the most striking one was the motivation behind the programs. **In practically every**

(Continued on page 4)



Lunch with our hosts in Sweden

Tips for Reviewing a Technical Paper By Marci Kenney

Considered "the heart and soul of scientific publishing",¹ peer review is essential to the conduct and dissemination of research. Although it has been practiced since the 1700's, very few people have actually been trained in the process of peer review. Most of us learn from trial and error. The Transportation Research Board (TRB), however, has recently published instructions for paper reviewers, and **Tips on How to Review a Technical Paper**, available on their website at: <http://www.trb.org/meeting/2009/PDFs/>

[PaperReviewInstructions.pdf](#). Although intended for those new to the TRB paper review process, the guidance is also useful for more experienced reviewers, and those reviewing papers for other scientific journals.

For TRB and for most scientific publications, the purpose of peer review is two-fold: First, to provide valuable feedback to the authors, and second, to inform decisions regarding presentation and publication.

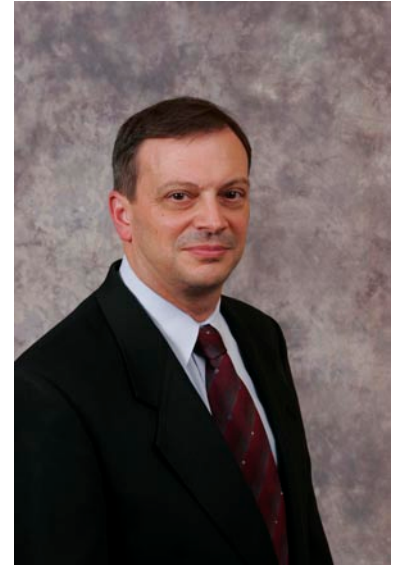
Beginning the Review: Expertise, Timeliness, Conflict of Interest and Bias

There are a number of things to take into consideration before you begin to review a paper. The first is **expertise**. "Scientific Peer Review has been defined as the evaluation of research findings for competence, significance, and originality by qualified experts."² If the paper is outside your area of expertise, you should return it to the paper coordinator.

(Continued on page 2)

Mark Norman Receives ITE's Distinguished Service Award

Mark Norman, Director of TRB's Technical Activities Division, has been named the recipient of the Institute of Transportation Engineers' (ITE's) 2008 Burton W. Marsh Award. The award—ITE's highest recognition of service—recognizes Norman's more than 30 years of staff and volunteer service to ITE and the industry. The award was presented at ITE's Annual Meeting, August 17-20, 2008, in Anaheim, California. Burton W. Marsh was a Founder, Past President, and former Executive Secretary of ITE, and he also served as the 1938-39 Chairman of TRB's Executive Committee.



He is considered a pioneer in urban traffic engineering, who recognized early on the importance of traffic safety programs that incorporate the driver, the vehicle, and roadway elements. Mark serves as TRB staff person to the Conduct of Research Committee. Congratulations, Mark. You have been a valuable asset to the committee, and clearly to the greater transportation community.

Tips for Reviewing a Technical Paper: The TRB Review Form

For the author [responses range from Excellent (5) to Poor (1) or No Opinion/Not Applicable]

1. Objectives appropriate and clearly stated:
2. Methodology technically sound:
3. Data valid:
4. Conclusions valid and properly supported:
5. Existing work adequately described and properly referenced:
6. Study effort adequately described:
7. Overall contribution to the state of the art or practice:
8. Originality and timeliness:
9. Usefulness to practitioners:
10. Usefulness to researchers:
11. Long-term value as a research reference or description of practice:
12. Paper organization:
13. Abstract clearly conveys meaning of paper:
14. Well written and easily understood:

For the paper review coordinator

15. Length of paper appropriate for subject and intended audience (Yes, Possibly, No, or No Opinion/Not Applicable)
16. Free of sensitive statements advocating special interests, advertising, and recommendations on government policies and programs (Yes, Possibly, No, or No Opinion/Not Applicable)
17. Rating for presentation (Excellent (5) to Poor (1) or No Opinion/Not Applicable)
18. Rating for publication (Excellent (5) to Poor (1) or No Opinion/Not Applicable)
19. Publication recommendation (Accept, Requires Revision or Re-review, Reject, No Opinion/Not Applicable)
20. This paper should be considered for a paper award (Yes, Possibly, No, or No Opinion/Not Applicable)

Tips for Reviewing a Technical Paper continued from page 1

Second, is **timeliness**. TRB considers approximately 3,000 papers each year, and strict deadlines must be met in order to keep the process going, to meet publication deadlines and prepare for the TRB annual meeting. If you are unable to review the paper and provide feedback within the timeframe indicated, you should return the paper promptly to the paper coordinator. Timeliness is important for peer review in general because delays in review can hold up publication of results and the expansion of scientific knowledge.

To ensure the credibility of the process, reviewers should not have a **conflict of interest** with the authors they review. TRB defines conflict of interest as "situations where the outcome of the review would influence your job, your financial situation, or your employer's finances."³ In these instances, you should contact the

paper coordinator and withdraw from the review.

The concept of **bias** is broader than conflict of interest and encompasses anything that would prevent you from reviewing the paper objectively.

Reading the Paper

Many peer reviewers begin by reading the paper with some general questions in mind. One thing to take into consideration is the type of paper being reviewed. TRB accepts a wide range of paper types. Your approach to the review will depend on the type of paper you are reviewing. The following are examples:

- For papers describing fundamental research or data collection: Are the measurements or analysis properly applied and the cor-

(Continued on page 3)

Tips for Reviewing a Technical Paper continued from page 2

rect conclusions drawn? Are there hidden factors that may invalidate the conclusions?

- For policy papers: Does the paper offer insight into the policy issues and alternatives? Does it provide well-reasoned critiques of alternative proposals?
- For state-of-the-practice papers: Does the paper cover a unique, creative tool or process that will be of interest to the transportation community? Have the authors overcome a problem that many practitioners are facing? Does the paper describe the innovation clearly?⁴

TRB's **Tips on How to Review a Technical Paper** suggests the following six steps for reading the paper:

- Step 1: Note the Authors
- Step 2: Read the Abstract Carefully
- Step 3: Skim the Conclusions
- Step 4: Read the Main Text (and Review the Charts and Graphs)
- Step 5: Note the References
- Step 6: Consider the Paper as a Whole⁵

Providing Feedback

Just as there are two purposes for peer review, there are two audiences for your comments. First, are the authors themselves. A carefully worded review with appropriate suggestions for revision can be very beneficial to the author(s), helping to ensure that their work is well written and clearly understood. The second audience is the publisher. In the TRB paper review process, and in many similar processes, recommendations for publication or presentation are provided separately to the paper coordinator. Decisions on publication are made by TRB staff,

taking into account the recommendations of many peer reviewers.

For the TRB paper review process, you are asked to provide comments electronically on a password protected TRB website. The TRB form includes two sets of check boxes—one that the author sees and one that only the paper coordinator sees—and two text boxes for you to provide written comments to the author and paper coordinator.

Writing Comments

As a reviewer, you should provide a short paragraph that summarizes the strengths and weaknesses of the paper you reviewed. TRB recommends that reviewers begin with an overall assessment of the paper and continue by identifying the prominent strengths and weaknesses. Start with a summary statement or overview. Starting with the “big picture” can help the author(s) to better understand the subsequent detailed comments. Detailed comments should focus on specific parts of the paper and provide guidance for revision or future research efforts.⁶ These detailed comments are valuable to the author(s) and can help improve the paper. A review that is too general (e.g., I didn't like the paper. It should not be published.) is not very helpful to the author of the paper.

The summary overview provides a general assessment of the paper, and may address the originality and timeliness of the research, and the overall contribution to the state of the art or practice. As a reviewer, you should also consider whether the objectives of the study are well defined, whether the methodology is technically sound, and whether the results are clearly stated. Finally, you should assess whether the author(s)' conclusions are justified by their results.

As you write your comments, try to direct them at the paper, not at the author(s) (e.g., this paragraph is confusing, not the authors are confusing). Use a polite, professional, and positive tone. Review charts and graphs to make sure that they are clear, and support the main

points of the paper. You may question whether alternative conclusions can be drawn from the data and may provide the author(s) with additional references. Describe what is missing if something “is not clear.” This gives the author(s) the opportunity to strengthen their work and improve the paper (for instance, by explaining why alternative interpretations are unlikely).

Conclusion

Being asked to review a paper for publication is an honor and a recognition of your expertise. Peer review helps ensure the high quality and integrity of published work. Providing good feedback is also useful to the authors and should help them improve their work. If you follow the tips for reviewing a technical paper provided by TRB, you will be able to provide useful feedback and may be able to improve your own work, as well.

Marci Kenney is retired from FHWA and is a Friend of the TRB Conduct of Research Committee. You can contact her at: bluejay7879@yahoo.com

References

¹Advances in Physiology Education . "A Personal View - How to Review a Paper." Available (online) <http://advan.physiology.org/cgi/content/full/27/2/47>.

²Brown T. *Sense About Science. Peer Review and the Acceptance of New Scientific Ideas* (online). <http://www.senseaboutscience.org.uk/pdf/PeerReview.pdf>. July 30, 2006.

³Transportation Research Board Reviewer Instructions Available online <http://www.trb.org/meeting/2009/PDFs/PaperReviewInstructions.pdf>

⁴Transportation Research Board Reviewer Instructions Available online <http://www.trb.org/meeting/2009/PDFs/PaperReviewInstructions.pdf>

⁵Transportation Research Board Reviewer Instructions Available online <http://www.trb.org/meeting/2009/PDFs/PaperReviewInstructions.pdf>

⁶Transportation Research Board Reviewer Instructions Available online <http://www.trb.org/meeting/2009/PDFs/>



Does It Matter What's Driving "US"? continued from page 1

"How would our outputs change if our motivation started with a desire to contribute to the overall good of society rather than simply to improve transportation?"

country we visited, research programs were driven by the desire to contribute to the overall good of society, not by the desire to simply enhance transportation.

At first I wondered if this was just a minor philosophical distinction. But as I saw one example after another of how this impacted all levels of program development and management, I realized the distinction was significant and powerful. This was quite evident at the National Institute for Land and Infrastructure Management (NILIM), a national research and experimental institute in Japan that performs technological policy research etc. that must be done by the national government, and is a part of the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT). According to Mashita Kazuhiko, NILIM's goals are to "create a beautiful, safe and vigorous national land and raise the level of satisfaction of the citizens who constitute the end users

of housing and infrastructure." They consider the widespread needs of the citizens when identifying potential research themes that will be included in the research policy. A comprehensive interdisciplinary approach to research that includes cultural and social sciences as well as physical sciences and engineering is considered vital. Researchers must therefore have a wide interest in other research fields, and the exchange of views with researchers of other fields and interdisciplinary studies is promoted.

In contrast, US transportation research programs are often characterized by research needs that produce incremental improvements in specific areas. The needs are defined by thousands of transportation professionals around the country. The work is usually done by researchers who specialize in a traditional civil or environmental area, not by interdisciplinary teams with broad expertise in other non-traditional areas. Program managers

hope that when we pull it all together we will have a comprehensive approach that addresses the nation's highest transportation priorities.

How would our outputs change if our motivation started with a desire to contribute to the overall good of society rather than simply to improve transportation? Would we investigate different things? Would our management processes be any different? Would we talk more to the public when we are identifying research needs? Would we have a more coordinated national agenda? Would we partner with different agencies and groups to address our transportation challenges? Does it really matter what's driving US? You tell me.

Monique is the Administrator, [Ohio Department of Transportation Office of Research & Development](http://www.ohio.gov/transportation). She can be reached at: Monique.Evans@dot.state.oh.us

Funding Sources for Transportation Research By Hau Hagedorn

The American Association of State Highway and Transportation Officials' (AASHTO) Research Advisory Committee (RAC), the CoR Coordination and Collaboration subcommittee, TRB staff and other transportation research professionals have been working jointly to develop "Funding Sources for Transportation Research: Competitive Programs".

It has been recognized that transportation is broad and complex, which leads to confusion among those who are conducting research. Those involved in developing the guide recognized the need to document and clarify three areas which seem to be the source of confusion when navigating transportation research. These relate to:

- Where can research statements be submitted to obtain funding?

- Who is performing research in particular areas of interest?
- What are the best places to search for research products of interest?

The task to tackle these issues, especially by a largely volunteer group, required the need to concentrate efforts first and foremost on an area where information was readily available and quick to assemble. Of the three, it appeared that the guide could initially focus on documenting where to submit research statements. The other areas are included within the guide, but to a lesser degree of detail. Additional details will be added to the document as more resources and information become available.

The Audience

Although a broad transportation professional audience may find the

guide interesting, the main audience is the transportation professional with a research need, who needs help figuring out to which research program they should submit their research topic, and who needs help writing a winning problem statement and/or proposal for that program. While the number of transportation research programs are vast, those examined closely within *The Guide* are limited to the research programs that accept research statements from a larger community.

The Guide At-A-Glance

In the Spring of 2008, the AASHTO RAC and CoR Collaboration and Coordination subcommittee embarked on developing a transportation research brochure. This evolved into the guide as the need for more detailed information was

(Continued on page 6)

From the Chair by Laurie McGinnis

Happy New Year! With the TRB Annual Meeting right around the corner, I'm sure many of you are busy with preparations for the yearly marathon. Once again, the Conduct of Research Committee is sponsoring a diverse set of sessions packed with valuable information. Building on the theme of collaboration that has been prominent in our discussions and activities over the past few years, two sessions will focus on international collaboration. These Monday morning sessions features leaders of US and European research organizations discussing the opportunity to find common ground for international research collaboration.

We are also sponsoring two sessions that feature speakers and lessons learned from the Transportation Research Program Administration scan tour. The scan team saw the annual meeting as a unique opportunity to bring a few experts to the US to help transfer some of the knowledge we gained to a broader audience. The session topics are research agenda setting and research

program evaluation – both topics where our committee members have been anxious to learn what other organizations are doing. These sessions look very exciting and informative, with the added bonus of hearing from international presenters.

In addition, don't forget the two workshop opportunities available on Sunday, our committee's first poster session on Monday afternoon, and the Conduct of Research Committee meeting on Tuesday afternoon. This may be the fullest Conduct of Research annual meeting schedule ever! Check out the details on the events below.

As my term as committee chair nears an end, I want to thank you all so much for your interest in and contributions to the work of the Conduct of Research Committee. Our list of accomplishments is significant and I believe we have made a difference in the field of transportation thanks to all of your hard work. Volunteering for TRB



activities is truly a case of getting out of it what you put in. I hope you feel as much satisfaction about our work over these past six years as I do. Thank you, again. It has been a pleasure working with you.

The CoR committee would like to thank Laurie for her service. Best wishes to you in your future endeavors!



CoR at TRB

Make sure to check out these Conduct of Research co-sponsored workshops and sessions at the upcoming TRB Annual Meeting in Washington, DC:

Sunday, January 11, 2009

Workshop 160 [Borderless Access to Information: International Transportation Research Web Resources](#), 1:30 PM - 4:30 PM, Hilton

Workshop 174 [Conduct of Transportation Environmental Research: What You Should Know About Getting It Done--Will Detailing the Process Yield Future Progress?](#), 1:30 PM - 5:00 PM, Hilton

Monday, January 12, 2009

Session 226 [International Research Collaboration: Finding Common Ground, Part I](#)

([Part 2, Session 277](#)), 8:00 AM - 9:45 AM, Hilton

Session 277 [International Research Collaboration: Finding Common Ground, Part 2](#)

([Part I, Session 226](#)), 10:15 AM - 12:00 PM, Hilton

Session 337 [Successful Research Management: Perspectives on Innovative Programs](#), 2:30 PM - 5:00 PM, Hilton

Session 415 [Setting the Research Agenda: Lessons from International Research and Development Programs](#), 7:30 PM-9:30 PM, Hilton

Tuesday, January 13, 2009

Conduct of Research Committee, 1:30 PM-5:30 PM, Hilton

Wednesday, January 14, 2009 Session 667 [Research Program and Project Evaluations: International Perspective](#), 8:00 AM-9:45 AM, Hilton

Upcoming Events

January 11-15, 2009. [88th Annual TRB Meeting](#). Washington, DC

March 16-18, 2009. [50th Annual Transportation Research Forum](#). Portland, OR

March 22-25, 2009. [Institute of Transportation Engineers \(ITE\) Technical Conference](#). Phoenix, AZ.

March 24-26, 2009. [Standing Committee on Research \(SCOR\) Meeting](#). Washington, DC

May 1-6, 2009. [American Public Transportation Authority \(APTA\) 2009 Bus & Paratransit Conference](#). Seattle, WA.

May 13-18, 2009. [American Association of State Highway and Transportation Officials](#)

([AASHTO](#)) [Spring Meeting](#). Bedford, PA.

April 19-22, 2009. [11th Joint Light Rail Transit Conference](#). Los Angeles, CA.

June 1-3, 2009. [ITS America 2009 Annual Meeting](#). Washington, DC.

June 14-18, 2009. [APTA Rail Conference](#). Chicago, IL.

Member Profile - Pat Casey

Patrick Casey was appointed to the Conduct of Research Committee in April 2008. He is the owner and CEO of CTC & Associates, a Madison, Wisconsin-based technical communications firm focused on the transportation sector. In the 1990s, prior to forming CTC, Pat was general manager of an automotive lubricants research and testing laboratory where he worked on ASTM test standards, led the company to ISO 9001 quality management certification and developed its first website. In the '80s he managed the district offices of a Michigan congressman and then joined the governor's policy staff where he served as agriculture advisor and correspondence director. Pat began work as an English teacher (and semi-truck driver during the summer) after graduating from Michigan State University in 1967 with a B.A. in English.



Pat is currently co-team leader, with Hau Hagedorn, of CoR's Goal 3 Action Plan on communication. They and the other team members are working to assist the committee in communicating useful information related to four themes: setting the research agenda, collaborating with research partners, overseeing research projects, and communicating the value of research results. Communications modes may include, in addition to the newsletter and a more collaborative website, periodic webinars, podcasts and workshops. Pat can be reached at pat.casey@ctcandassociates.com.

“The guide is a “living” document. Some sections are still under development and additional information will be added as it is completed.”

Funding Sources for Transportation Research continued from page 4

needed, and clearly a brochure was insufficient in covering the vast information required to make it substantive. As mentioned previously, the guide consists of three parts:

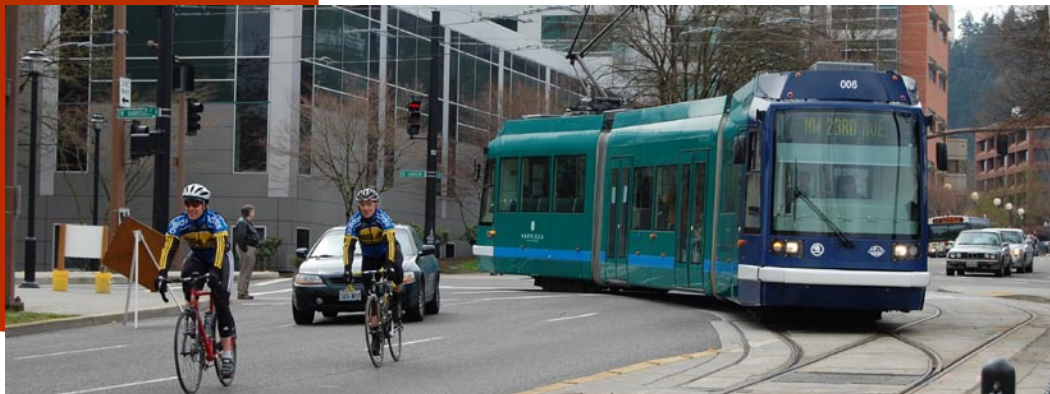
What are the characteristics of the research you would like to have funded? The first step in having research funded is to understand what type of research is being proposed. Setting the research context is important as it will clarify the appropriate fit with funding pro-

grams. The guide discusses framing research in terms of geographic scale, mode of transportation, immediacy or timing, amount of funding required and whether the research is applied or basic. These considerations will help researchers find the appropriate research program

Which research program is the best fit for your research statement? The next step is to figure out where to propose the research. There are dozens of federal, state, university,

and private opportunities; and navigating and understanding the differences can be overwhelming. The guide focuses on funding sources that accept research ideas and statements from the transportation community. The programs described include information on the following: general description, type of research funded, funding levels and project time frame, schedule, project solicitation and submission, selecting processes, project selection criteria and tips for writing winning research statements.

Where can you learn more about proposed, ongoing, and completed research? Transportation research funding is competitive. Understanding what research has already been undertaken in addition to seeking collaboration and partnership to avoid duplication is essential. The third piece of the guide discusses where to find completed, on-going, and unfunded research.



(Continued on page 7)

Funding Sources for Transportation Research continued from page 6

Work in Progress

It is recognized by the authors of the guide that it is incomplete, however, the importance of sharing the information in its current state far exceeded the need for completeness. The guide is a “living” document. Some sections are still under development and additional information will be added as it is completed. For other sections, authors have yet to be identified to develop relevant content.

One of the biggest challenges of the guide is that the evolving state of transportation research requires that individual research program descriptions be updated on a regular basis. Maintaining up-to-date information will require an organized effort. This is the first

time a document with this purpose has been assembled. Hopefully feedback from readers will help fine-tune future versions of the guide, and stimulate interest and participation by others within the transportation research community. The intent is that the most recent version will always be available on the TRB website. The future home of the guide is: <http://www.trb.org/ResearchFunding>.

Continuing Work

Funding Sources for Transportation Research: Competitive Programs is an on-going effort. If you are interested in contributing, or

providing suggestions, additions, or corrections please submit them to Kim Fisher at kfisher@nas.edu.



TRB & Other Related News

The following are newsworthy highlights that may be of interest to the broader transportation research community:

- **Submit a Publication to TRB for TRIS Indexing.** TRB's [new information website on the Transportation Research Information Services \(TRIS\) Database](#) allows users to submit their publications directly to TRB for indexing in the TRIS Database including an updated list of serials. The TRIS Database is the world's largest and most comprehensive bibliographic resource on transportation research information. TRIS contains about 700,000 records of published research, more than 45,000 of which have links to the full text of the documents. For more information, go to: <http://tris.trb.org/about/>
- **TRB Seeking Panel Nominations for FY 2009 TCRP Projects.** TRB's Transit Cooperative Research Program (TCRP) is soliciting nominations for members of panels that will oversee individual TCRP research projects as part of its Fiscal Year 2009 activities. Nominees should have expertise directly relevant to the issues being addressed by the project. The nomination of women and minority candidates is encouraged. Panels for the new research projects are

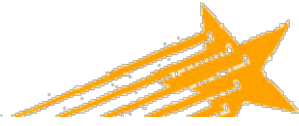
scheduled to meet during March 2009. Nominations **due** January 7, 2009. Download the details at: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_fy2009PanelNominations.pdf

- **Broad Agency Announcement (BAA) for Third Round of Exploratory Advanced Research (EAR).** The Federal Highway Administration is soliciting proposals that address Exploratory Advanced Research topics. During 2007 and 2008 FHWA engaged stakeholders from the highway research community to identify topics of research that promise transformation and possible breakthroughs in highway technology, processes and policies. **Proposals due 4:00 pm EST February 4, 2009.** FHWA is moving forward with six of the topic areas that had a strong scientific and technical basis through the issuance of this BAA. The six topic areas include:
 - Behavioral Sciences Approach to Testing, Validating and Establishing Best Practices for Alternative Highway Revenue Collection;
 - Advanced Imaging Systems;
 - Freeway Merge Assistance;
 - Next Generation Vehicle Positioning;

- Driver Behavior In Traffic; and
- Assessing the Potential of Automated Transit Services and Effective Pedestrian/Bicycle Facilities on Urban Travel Patterns.

For more information, go to: <https://www.fbo.gov/index?tab=documents&tabmode=form&subtab=core&tabid=e63c123f0e9b5e4bfb727597be1dda26>

- **Research Pays Off.** This is the latest in a publication series as a part of TR News. The Illinois Department of Transportation (DOT) is using battery backups to operate their traffic signals to avoid delays and dangers from outages. If you have a suggestions for “Research Pays Off” topics, contact G. P. Jayaprakash, Transportation Research Board, phone 202-334-2952, e-mail gjayaprakash@nas.edu. Download the full article at: [http://onlinepubs/trb.org/onlinepubs/trnews/trnews258rpo.pdf](http://onlinepubs.trb.org/onlinepubs/trnews/trnews258rpo.pdf)
- **SHRP2 Requests for Proposals.** The next round of RFPs will be released in March 2009. See: <http://www.trb.org/shrp2/RFPs.asp>



About COR

The Conduct of Research Committee ABG10 serves to increase the quality and effectiveness of transportation research by supporting and facilitating improved research planning and management processes. It promotes improved coordination between those who sponsor and conduct research and those who implement research products. It assists the Transportation Research Board in its role of stimulating research and serving as a national clearinghouse for research activities. For more information, visit us at: <http://www.mrutc.org/COR>

Membership

Chair, **Laurie G. McGinnis**
Associate Director, Center for Transportation Studies
[University of Minnesota](#)

Secretary, **Jason J. Bittner**
Deputy Director, National Center for Freight and Infrastructure Research and Education
[University of Wisconsin, Madison](#)

TRB Staff Representative, **Mark R. Norman**
Director, Technical Activities
[Transportation Research Board](#)

MEMBERS

Alberto Albahari
Researcher
[Universidad de Malaga](#)

Michael R. Bonini
Transportation Planning Manager, Planning and Research
[Pennsylvania Department of Transportation](#)

Patrick C. Casey
Chief Executive Officer
[CTC and Associates LLC](#)

Nancy Chinlund
Chief, Office of Planning, Policy and Innovation
[California Department of Transportation](#)

Debra S. Elston
Director, Office of Corporate Research, Technology, and Innovation Management
[Federal Highway Administration](#)

Monique R. Evans
Administrator, Office of Research and Development
[Ohio Department of Transportation](#)

Jennifer M. V. Fitch
Research Engineer, Research and Development Unit
[Vermont Agency of Transportation](#)

Gary A. Frederick
Director, Transportation Research and Development
[New York State Department of Transportation](#)

Hau T. Hagedorn
Research Program Manager
[Oregon Transportation Research and Education Consortium \(OTREC\)](#)

Barbara Thomas Harder
Principal
[B. T. Harder, Inc.](#)

Kathryn Harrington-Hughes
President
[Harrington-Hughes & Associates, Inc.](#)

J. Edward Johnson
Chief Scientist
[National Aeronautics and Space Administration \(NASA\)](#)

Richard C. Long
Director, Research Center
[Florida Department of Transportation](#)

Josef Mikulik
Director
[Transport Research Centre \(CDV\), Czech Republic](#)

Wilfrid A. Nixon
Professor, Civil and Environmental Engineering
[University of Iowa](#)

Ellen M. Oman
Director of Research and Library Services,
[Washington State Department of Transportation](#)

Bonnie A. Osif
Librarian, Engineering Library
[Pennsylvania State University](#)

Edward J. Seymour
Associate Agency Director, Texas Transportation Institute
[Texas A&M University](#)

Susan Sillick
Research Programs Manager
[Montana Department of Transportation](#)

Amy Starr
Research Engineer, Materials and Research
[Nebraska Department of Roads](#)

EMERITUS MEMBERS

Denis E. Donnelly
Research Engineer
[Colorado Asphalt Pavement Association](#)

The opinions expressed in this newsletter are those of the authors and do not necessarily reflect the views of the Transportation Research Board or the National Academies of Science. If you have content suggestions or would like to contribute to future newsletters, please contact Hau Hagedorn at hagedorn@pdx.edu.