

# TRB ABJ80 Statistical Methods

Linda Ng Boyle, ABJ80 Chair

Tuesday, Jan 14, 2014, 7:30-10:00 pm

# Agenda

7:30 to 7:40 pm Introductions

7:40 to 7:45 pm Approval of 2013 Annual Meeting Minutes (*Ida van Schalkwyk*)

7:45 to 7:50 pm Committee Rotation Requirements and Membership Updates

# Committee Rotations

Thank you for YEARS of service

Roya Amjadi

Dominique Lord

Bhagwhat Persaud

Ida Schalkwyk

Promod Chandhok

Ahmed Abdel-Rahim

Byungkyu Brian Park

Xiao Qin

Billy Williams

# Memberships

- Balanced representation of
  - Relevant disciplines
  - Geographic region
- Appropriate balance of employer types or affiliations
- Appropriate representation of the various modes
- Proper consideration of women and minorities
- No more than one member from any single organization
- Membership on multiple committees
  - Cannot be on more than two committees
- Appropriate representation from state DOTs

# Membership Roster

- 25 members (chair included),
- Up to 5 additional slots for international members (non-U.S.), and
- Up to 4 additional slots for “young” members (35 years or younger).

# Agenda

7:50 to 8:00 pm:

Workshops/Sessions Sponsored and Co-Sponsored by ABJ80 in 2014

# Workshops/Sessions

## **Workshop 208: Transportation Data Competition**

Sunday 1:30PM- 4:30PM, *Hilton, Columbia Hall 9*  
with ABJ20, ABJ50,ABJ70, AND10, AND30

# TRB Data Contest (31 submissions)

- **Best Overall Paper:** Jeff Keller
- **Best Professor-Led Paper:**
  - Naveen Eluru, Shamsunnahar Yasmin
- **Best Researcher-Led Paper:**
  - Huimin Xiong, Prabha Narayanaswamy, Shan Bao, Carol Flannagan
- **Best Student-Led Paper:** Behzad Karimi
- **Best Industry Paper:** Nikhil Sikka, Tristan Cherry
- **Industry Honorable Mention:**
  - Michael Abramovich, Swapnil Rajiwade, Dwayne Henclewood



# Workshops/Sessions

## **Transportation Statistics Interest Group (TSIG) Open Meeting**

Sunday 5:00PM- 6:00PM, *Hilton, Fairchild*  
with ABJ95

## **Poster Session 370 Research in Statistical Methods in Transportation**

Monday 2:00PM- 3:45PM, *Marriott, Salon 2*

# Workshops/Sessions

## **Lectern Session 398: Statistical Challenges in the Analysis of Naturalistic Driving Data**

Monday 3:45PM- 5:30PM, *Marriott, Maryland B*  
with AN000, ANB00

## **Lectern Session 789: Standardization of Measurement of Driving Performance**

Wednesday 10:15AM- 12:00PM, *Marriott, Thurgood Marshall North*  
with AND10, AND30

## **Lectern Session 811: Analytical Models for Safe and Sustainable Transport**

Wednesday 2:30PM- 4:00PM, *Marriott, Delaware A*

# Agenda (Xiao Qin)

8:00 to 8:15 pm:

Paper review process, statistics, and  
identification of issues

# ABJ80 Paper Review

	2013	2014
<b>Number of papers submitted</b>	37	29 (10 for presentation only+19 for both)
<b>Number of papers presented</b>	25 (67%)	15 (52%)
<b>Number of papers published</b>	10 (37%)	4 (21% or 14% if total submissions are considered)

# Review Workload

- 74 reviewers invited;
- Friends 1~2 papers and committee members 2~3 papers;
- Invited 4 reviewers per paper (TRB requires at least 3 reviewers for each paper);
- 113 reviews received (3 reviewers per paper).

# Review Timeline

	Number of Reviews Completed	%	Comments
8/18/2013	0	0.00%	Reviews assigned
9/4/2013	11	9.73%	1st reminder sent
9/5/2013	12	10.62%	One day after reminder sent
9/9/2013	22	19.47%	Five days after reminder sent
9/11/2013	33	29.20%	Seven days after reminder sent
9/12/2013	40	35.40%	Eight days after reminder sent
9/13/2013	42	37.17%	Nine days after reminder sent
9/14/2013			2nd reminder sent
9/15/2013	64	56.64%	12:45pm (Reviews due)
9/16/2013	95	84.07%	10:00am (1st day after reviews due)
9/23/2013	113	100%	one week after reviews due

# Improving TRB Manuscript Reviews

- Reviewing TRB papers is the main obligation of committee members and friends
- Maintains quality of the conference

# Review Cycle

<b>June 1</b>	Paper submission website opens
<b>August 1</b>	Deadline for submission of the full paper in PDF
<b>September 15</b>	Deadline for reviewers to complete paper reviews
<b>October 15</b>	Deadline for chairs to send review recommendations to authors
<b>November 15</b>	Deadline for paper resubmission for inclusion on the Annual Meeting Compendium DVD or rereview
<b>Early February</b>	Final author notification on TRR publication
<b>March 15</b>	Authors resubmit in final format

- Committee Chair and Paper Review Coordinator may seek out experts from other fields to round out a review team.



# Contact Chair/Review Coordinator if.

- Inadequately qualified or lack time to judge fairly
- Potential conflict of interest or personal bias
- Know it was presented elsewhere OR know it is under review at another journal
- Have convincing evidence that a manuscript contains plagiarized material or falsified research data
- Paper exceeds word + figure limit by a large amount
- Writing quality is poor: unable to understand what was done
- Paper contains overt commercialism
- REMEMBER: All manuscripts and reviews should NOT be shared and must be treated as confidential

# Things to note

- It is okay to reject a paper
- Your grading/rankings should be consistent with the comments.
  - Saying a paper is great in comments, but giving it 1's and 2's for each category
  - Saying a paper should be rejected, but giving 4's and 5's
- USE the Comments to the Chair. This is private and VERY HELPFUL.
  - You want to be polite to authors, but always tell the chair any concerns you may have
  - May note that the issues with paper are not related to ranking

SHRP 2 Safety

# **SHRP 2 Naturalistic Driving Study Data: Overview**

TRB 2014 Annual Meeting  
by Ken Campbell

# The Big Picture

- Data collection ended December 6 – both driving (NDS) and roadway (RID) data
- Data processing for the NDS and RID databases complete March 31, 2014
- Data enhancements to assist users implemented throughout 2014
- Three analysis contracts underway; final reports July 2014
- Preparing for Phase 1 of Safety Implementation; Phase 1 begins January 1, 2015

# Data

- Data status as of January 9, 2014:
  - 3,147 participants completed (at least 4 months in study)
  - 5.4 M trips (consented drivers)
  - 3,958 vehicle-years of data, 101% of 3,900 goal
  - 49.6 M vehicle-miles
  - 525 known crashes, more in database not yet identified
  - 12,500 centerline miles of roadway data
  - Currently collecting supplementary data from sites
    - AADT, weather, work zones, crashes, etc.
    - collection through June 2014

# Data Enhancements

Smaller, more accessible data sets

1.Data Access Website

<http://insight.shrp2nds.us/>

2.Trip summary files

3.Crash, near-crash, and baseline event files

Critical tool for data users

4.Link NDS and Roadway data



# Analysis Contracts

- Three analysis contracts
  - Road departure on rural 2-lane curves – Iowa State University  
use: cost-effective measures to prevent road departure crashes
  - Offset left-turn bays – MRI Global  
use: cost-effective intersection design
  - Driver inattention – SAFER, Chalmers University, Sweden  
use: in-vehicle driver attention tracking, warn distracted drivers
- Final reports July 2014
  - Will present results at SHRP 2 Symposium July 10, 2014



# Implementation Phase 1

- Begin January 1, 2015, and last up to 5 years
- \$25 million from SHRP 2 implementation funds
- Governance structure based on SHRP 2:
  - SHRP 2 Safety Data Oversight Committee responsible for Phase 1 strategy and budget and data access policy
  - Technical committees to support OC
- Primary center to house, manage data
- Remote access/user support centers
- TRB management of planning, committees, contracts, outreach, studies for future phases



# THANK YOU

Ken Campbell  
SHRP2 Chief Program Officer for Safety

[kcampbell@nas.edu](mailto:kcampbell@nas.edu)

[www.trb.org/SHRP2/safety](http://www.trb.org/SHRP2/safety)

NDS Data Access Website

<http://insight.shrp2nds.us/>

# Agenda

- 8:15 to 8:20 pm Paper Award (*Promod Chandhok*)
- New Paper Award Chair:  
Panagiotis Ch. Anastasopoulos

# Paper Award (Promod Chandhok)

Winner: Multivariate spatial models of excess crash frequency at areal level: The case of Costa Rica

Corresponding author:  
Jonathan Aguero-Valverde

8:20 to 8:25 pm: Social Media Activities  
(*Naveen Eluru*)

- 8:25 to 8:40 pm  
TRB Circular on Analytical Tools for  
Transportation Researchers and Practitioners  
(*Linda Boyle, Gord Lovegrove*)

# TRB Circular: Statistics for Transportation Practitioners (How to Avoid Common Errors)

Chair & Editor: Linda Ng Boyle, [linda@u.washington.edu](mailto:linda@u.washington.edu)

Asst Editor: Dr Gord Lovegrove, [gord.lovegrove@ubc.ca](mailto:gord.lovegrove@ubc.ca)

## Background

**Objective:** This TRB circular is intended to be a beginner's statistics tutorial for transportation state agencies, graduate students, and researchers. It will flag common errors, and how to avoid them. It will illustrate concepts via transportation case studies. Each chapter 7500 words, lets follow TRB author guide.

# Proposed Outline

## **Preface/Motivation:**

Each chapter will include case studies from transportation

## **Chapter headings:**

1. Types of Transportation Data
2. Data collection typically seen in the transportation field
3. Data cleaning: issues specific to transportation data
4. Describing and visualizing data
5. Sample size and Power analysis
6. Sampling distributions commonly used in transportation analyses
7. Elementary Inferential stats, basic comparison tests
8. Regression Techniques (Model adequacy, specification errors)
9. Interpreting your results
10. Experimental Design (e.g., Driving Simulator Studies)
11. Common Definitions/Glossary

# TRB Circular

- Current volunteers/chapter authors
  - Gord Lovegrove (UBC)
  - Linda Boyle (UW)
  - Feng Guo (VT)
  - Birsen Donmez (U. Toronto)
  - Mary Bertola (Leidos)
  - Karin Bauer (MRI)
  - Mehdi Nassipour (Illinois DOT)
  - Billy Williams
  - Promod Chandhok (BTS)
  - David Reinke
  - Raul Avelar



## 8:40 to 8:45 pm: Subcommittee Assignments

- Strategic Planning
- Research Needs Statements
- Paper review
- TRB Circular
- Future session planning

# Agenda

8:45 to 8:55 pm SHRP 2 activities (*Ken Campbell*)

*8:55 to 9:05 am (floating 15 minutes)*

*TRB initiatives and Data Section News (Bernardo Kleiner)*

# Agenda

9:05 to 9:10 pm Research needs statements  
(*Karin Bauer, Thomas Jonsson*)

Some ideas:

- SHRP 2 (Karin Bauer, Feng Guo, Ken Wu)
- ITE Trip Generation (Yiyi Wang, David Reinke, Jonathan wood, Raul Avelar)

# Agenda

9:10 to 9:35 pm:ABJ80 Strategic Needs  
Statement (*David Reinke*)

# Strategic Needs

*“The ABJ80 Committee is concerned with the appropriate application of statistical methods in the field of transportation.*

*The committee serves as a resource on statistical matters for all TRB committees and related National Academies of Science committees;*

*will foster understanding and use of statistics through dissemination of educational activities;*

*and will identify and foster research needed in statistics within the transportation domain”*

# Objectives

- Providing **Statistical Methods Education** to committees and members across TRB
- **Broadening the influence on ABJ80** on the State of the Practice Statistical Methods to committees and members across TRB
- **Raising awareness regarding** the debates and discussions surrounding the **merits and limitations of competing statistical methods** applied in transportation research
- **Identifying connections between statistical methods and transportation applications** within TRB
- **Recognizing significant contributions** toward the advancement of statistical methods within TRB.

9:35 to 9:45 pm:

Future Committee Activities and Sessions

9:45 to 9:50 pm: JSM (Feng Guo, Promod Chandhok)

- Joint Statistical Meeting, Boston, MA, Aug 2-7, 2014
- Invited Papers in Transportation Statistics
- ABJ80 Mid-year meeting
- Coordination with TSiG  
(Transportation Statistics Interest Group)



9:50 to 10:00 pm:

- Call to Audience
- Relevant activities of other committees, conferences, etc.
- Traffic Records Forum (*Bob Scopatz*)