



RPUG 2024
Road Profile Users' Group

April 29 - May 2



ST. AUGUSTINE
FLORIDA

New Technology For An Old World

WHAT IS & WHAT'S NEW WITH TRB AKP50?

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CHAIR OF TRB AKP50

MAY 1, 2024

RPUG ANNUAL MEETING



RPUG
Road Profile Users' Group

WHAT IS IT?

TRANSPORTATION RESEARCH BOARD (TRB)

UNDER THE UMBRELLA OF THE NATIONAL ACADEMIES OF SCIENCES (NAS),
ENGINEERING (NAE), AND MEDICINE (NAM)

- PRIVATE
- NON-PROFIT
- ESTABLISHED 1863
 - ACT OF CONGRESS
 - SIGNED BY PRESIDENT ABRAHAM LINCOLN





TRANSPORTATION RESEARCH BOARD

RESEARCH

- PUBLICATIONS
- > 300 ACTIVE RESEARCH PROJECTS
- \$62 MILLION ANNUALLY VIA COOPERATIVE RESEARCH PROGRAM
 - NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP)
- PEER REVIEWED PAPERS IN THE TRANSPORTATION RESEARCH RECORD (TRR)



TRANSPORTATION RESEARCH BOARD

CONVENE

- > 170 STANDING COMMITTEES
- > 8000 COMMITTEE AND PANEL MEMBERS WORLDWIDE
- ANNUAL MEETING > 20,000 ATTENDEES; > 800 SESSIONS & WORKSHOPS
- WEBINARS

ADVISE

- INFLUENCE TRANSPORTATION RELATED LEGISLATION

TRB STANDING COMMITTEE AKP50

PAVEMENT SURFACE PROPERTIES & VEHICLE INTERACTION



- PART OF THE TRANSPORTATION INFRASTRUCTURE GROUP (TIG)
- WITHIN THE PAVEMENT SECTION
- ONE OF FIVE WITHIN THE SECTION



TRB STANDING COMMITTEE AKP50

PAVEMENT SURFACE PROPERTIES & VEHICLE INTERACTION

SCOPE: THIS COMMITTEE IS CONCERNED WITH THE INTERACTIONS BETWEEN TRAVELED SURFACES AND VEHICLES TO ASSESS SAFETY, COMFORT, CONVENIENCE, SUSTAINABILITY AND ECONOMICS. AREAS OF INTEREST INCLUDE EVALUATION, MODELING, AND MEASUREMENT OF THE FACTORS THAT INFLUENCE THESE INTERACTIONS INCLUDING FRICTION, TEXTURE, ROUGHNESS, RIDE COMFORT, NOISE, AND ROLLING RESISTANCE.



TRB STANDING COMMITTEE AKP50

PAVEMENT SURFACE PROPERTIES & VEHICLE INTERACTION

- SMOOTHNESS/ROUGHNESS/RIDE QUALITY
- FRICTION & GRIP
- TIRE/PAVEMENT NOISE
- ROLLING RESISTANCE
- SPLASH, SPRAY & HYDROPLANING

WHAT AKP50 DOES



- DEVELOP RESEARCH NEEDS STATEMENTS (RNS)
- SEEK FUNDING FOR RESEARCH
- SPONSOR WORKSHOPS AT TRB ANNUAL MEETING
- SPONSOR WEBINARS
- E-CIRCULARS

RECENT RNS



- ENGINEERING REQUIREMENTS FOR MEASUREMENT OF PAVEMENT CONDITION USING EMERGING TECHNOLOGY — PUBLISHED NOVEMBER 2023
- OPTIMIZED FRICTION TREATMENT STRATEGIES — PUBLISHED JULY 2023

WHAT AKP50 DOES

- WORK WITH VARIOUS GROUPS
 - FHWA
 - POOLED FUNDS
 - RPUG
- PEER REVIEW PAPERS



AKP50 MEMBERSHIP



- CHAIR, COMMUNICATIONS COORDINATOR, RESEARCH COORDINATOR
- MEMBERS
 - MAIN, INTERNATIONAL, YOUNG, EMERITUS
- FRIENDS

AKP50 MEMBERSHIP



- CURRENTLY WORKING ON TRIENNIAL STRATEGIC PLAN
- REFORMULATING TASK GROUPS
- FILL ANY REMAINING MEMBER VACANCIES

AKP50 MEMBERSHIP



TASK GROUP 1: SURFACE PROFILE MEASUREMENT AND USE WITH ROUGHNESS AND RIDE QUALITY

1. ADVANCING EQUIPMENT CERTIFICATION & VERIFICATION
2. ADVANCING APPLICATION & USE IN URBAN & LOW SPEED ROADS
3. EMERGING TECHNOLOGY FOR RQ ASSESSMENTS
4. EXPANDING PROFILE MEASUREMENT & USE ON WALKWAYS & BIKEWAYS

AKP50 MEMBERSHIP



TASK GROUP 2: RELATING TEXTURE TO FRICTION AND APPLYING THAT KNOWLEDGE TO ADVANCE HIGHWAY SAFETY

1. DEVELOP & DISSEMINATE CORE KNOWLEDGE MATERIALS
2. ADVANCING FRICTION MANAGEMENT PROGRAMS
3. DEVELOP SAFETY PERFORMANCE FUNCTIONS THAT INCORPORATE FRICTION EVALUATION

AKP50 MEMBERSHIP



TASK GROUP 3: MICROTEXTURE AND MACROTEXTURE QUANTIFICATION AND USE

1. VALIDATE & VERIFY VARIOUS MEASUREMENT EQUIPMENT
2. DEVELOPMENT & APPLICATION OF ADVANCED MACROTEXTURE PARAMETERS

FRICTION/GRIP, T/P NOISE, ROLLING RESISTANCE, SPLASH AND SPRAY,
HYDROPLANING

AKP50 MEMBERSHIP



TASK GROUP 4: NOISE AND ENVIRONMENTAL ISSUES

1. TIRE/PAVEMENT NOISE
2. FUEL/ENERGY CONSUMPTION DUE TO ROAD ROUGHNESS AND TIRE HYSTERESIS
3. POLLUTION FROM TIRE WEAR PARTICLES

TRB STANDING COMMITTEE AKP50

PAVEMENT SURFACE PROPERTIES & VEHICLE INTERACTION



- GET OR SIGN ON AT [MYTRB.ORG](https://mytrb.org)
- BECOME A FRIEND OF THE COMMITTEE IF YOU ARE NOT CURRENTLY A FRIEND
- HELP US!

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PAVEMENT SURFACE PROPERTIES & VEHICLE INTERACTION



QUESTIONS?

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