

Information and Invitation

13th international symposium

**PASSIVE SAFETY
of RAIL VEHICLES**

CONFERENCE DATE:
21st - 22nd of March 2024

Deadline for your application:
14th of March 2024



**BAHN
VERBAND
e.V.**

Railway-Symposium★info

Welcome to the international RAILWAY-SYMPOSIUM in Berlin!

13th international symposium

PASSIVE SAFETY of RAIL VEHICLES

**Berlin,
21st - 22nd of March 2024**

www.passive-safety-symposium.info



APPLY NOW to join international symposium, the exhibition and be a part of the worldwide community of experts in the field of passive safety of rail vehicles and interior design.

Official partners of the exhibition PASSIVE SAFETY and INTERIOR DESIGN 2024

STADLER

SIEMENS ALSTOM

U.S. Department of Transportation
Volpe Center

JR Railway Technical Research Institute

VÖKVI GREEN BUFFERS

KRI Korea Railroad Research Institute
Protection Engineering CONSULTANTS

SNCF **OLEO** INTERNATIONAL

Place YOUR COMPANY LOGO
as official partner of #PS2024



✓ **SYMPOSIUM**

✓ **EXHIBITION**

✓ **NETWORKING**

www.passive-safety-symposium.info

WHY to join the international symposium for railway and passive safety experts?

During the 13th symposium in March 2024 all relevant aspects of PASSIVE SAFETY of different categories of rail vehicles (vehicles for high speed transportation systems, light rail vehicles, trams, locomotives, coaches, freight waggon etc.) shall be reflected.

Speakers from many countries are showing highly specialised presentations to discuss relevant topics with participants from all over the world. We are looking forward to seeing you in Berlin!

If the following topics are relevant to your current fields of work, the upcoming RAILWAY-SYMPOSIUM is important for you!

Railway-Symposium.info

PASSIVE SAFETY of RAIL VEHICLES

- * RAILWAY VEHICLES
- * CRASH ENERGY MANAGEMENT
- * INTERIOR EQUIPMENT
- * COLLISION SCENARIOS
- * CRASHWORTHINESS REQUIREMENTS

RESEARCH & DEVELOPMENT

- * SCIENTIFIC RESEARCH
- * PRODUCT DEVELOPMENT
- * SIMULATION AND TESTING
- * (NEW) MATERIALS

PASSIVE SAFETY of RAIL VEHICLES

Berlin, 21st - 22nd of March 2024



REGULATIONS

- * INTERNATIONAL ASPECTS:
ASIA, EUROPE, U.S.A.
- * LEGISLATION
- * REVISION OF THE EN 15227

WORKSHOP / THINK TANK

- * Crash Energy Management
- * Interior Equipment
- * DIGITAL RAIL

PROGRAMME on Thursday, 21st of March 2024

13th international symposium on PASSIVE SAFETY of RAIL VEHICLES in Berlin / Germany

© 09:00 - 10:00 CHECK-IN-TIME: Come together / Exhibition / Networking Coffee #1

PASSIVE SAFETY OF RAIL VEHICLES 2024: PASSIVE SAFETY, CRASHWORTHINESS AND INTERIOR DESIGN (INAUGURAL ADDRESS #PS2024)

Dipl.-Volkswirt Eckhard **SCHULZ** (Managing Director); [BAHNVERBAND e.V.; IFV Bahntechnik; Berlin / Germany]

ON THE DEVELOPMENT OF CRASHWORTHINESS DESIGN IN RAILWAY VEHICLES: AN OVERVIEW

Dipl. Ing. Dr. habil. Alois **STARLINGER** (Head of Structural Analysis, Testing & Vehicle Authorization); [Stadler Rheintal AG; Sankt Margrethen / Switzerland]

LAST RETURNS OF EXPERIENCE ON THE CRASHWORTHY ROLLING STOCK IN FRANCE: RETURNS OF EXPERIENCE ON THE APPLICATION OF THE EN 15227 AND SNCF PASSIVE SAFETY REQUIREMENTS

Patrick **JUMIN**, Ph.D. (National Technical Referent for carbody structure and interfaces); [SNCF, Rolling Stock Engineering Center; Le Mans / France]; {and} Khalid **EI MOUAHHID** [SNCF] {and} Aurélie **GOUDÉ** [SNCF]

© COFFEE BREAK Networking time and exhibition PASSIVE SAFETY #2

NUMERICAL SIMULATION OF THE REAL COLLISION OF THE LOCOMOTIVE CLASS 742 WITH THE SINGLE-DECKER ELECTRIC UNIT

Zdeněk **MALKOVSKY**, Ph.D., (Managing Director, CEO); [VÚKV a.s., Prague / Czech Republic] {and} Dipl.-Ing. Roman **JEŽDÍK** (Structural Engineer); [VÚKV a.s., Dept. of vehicle strength; Prague / Czech Republic]

SOME RESULTS OF THE PROJECT „ANALYSIS OF A TRAM-PEDESTRIAN COLLISION: VALIDATION OF SIMULATION MODELS“

Dipl.-Ing. Roman **JEŽDÍK** (Head of Vehicle strength department); [VÚKV a.s., Dept. of vehicle strength; Prague / Czech Republic] {and} Dipl.-Ing. František **LOPOT**, Ph.D. (Head of Department of Designing and Machine Components); [Czech Technical University; Faculty of Mechanical Engineering; Prague / Czech Republic] {and} Ing. Vojtěch **RULC**, Ph.D. (Project Engineer); [Advanced Engineering s.r.o. ; Prague / Czech Republic]

© LUNCH BREAK Networking time and exhibition PASSIVE SAFETY #3

AMTRAK PASSENGER TRAIN DERAILMENT INVESTIGATION, SEPTEMBER 25, 2021, JOPLIN, MONTANA/ U.S.A.: WINDOW RETENTION AND OTHER PASSIVE SAFETY FEATURES IN A ROLLOVER DERAILMENT

Kristine **SEVERSON**, M.Sc. Mechanical Engineering (Senior Mechanical Engineer/Project Manager Interior Occupant Protection); [U.S. Department of Transportation, Volpe National Transportation Systems Center, Structures and Dynamics Division; Cambridge, MA / U.S.A.] {and} Karina **JACOBSEN**, M.Sc. [U.S. DOT; Volpe]

LOCOMOTIVE CRASH ENERGY MANAGEMENT TRAIN-TO-TRAIN IMPACT TEST RESULTS

Karina **JACOBSEN**, M.Sc. (Senior Mechanical Engineer); [U.S. Dept of Transportation (Volpe National Transportation Systems Center); Cambridge, MA / U.S.A.] {and} Patricia **LLANA**, M.Sc. (Senior Mechanical Engineer); [U.S. Department of Transportation, Volpe National Transportation Systems Center, Cambridge/MA]

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WHEELCHAIR RESTRAINT AND OCCUPANT PROTECTION EXPERIMENTS

Kristine **SEVERSON**, M.Sc. Mechanical Engineering (Senior Mechanical Engineer/Project Manager Interior Occupant Protection); [U.S. Department of Transportation, Volpe National Transportation Systems Center, Structures and Dynamics Division; Cambridge, MA / U.S.A.]

INNOVATIONS IN PASSIVE SAFETY: RELEVANT CHALLENGES FOR THE THINK TANK PASSIVE SAFETY

Dipl.-Volkswirt Eckhard **SCHULZ** [THINK TANK RAILWAY-NETWORK.info / Working group PASSIVE SAFETY]

WORKSHOP & DISCUSSION ON PASSIVE SAFETY OF RAIL VEHICLES (VARIOUS COUNTRIES)

N.N.; N.N.; N.N.

© 17:15 (approx.) End of the programme of the FIRST CONFERENCE DAY



TRANSFER to the Restaurant for the TRADITIONAL EVENING EVENT in Berlin

#5

BUSINESS CARD EXCHANGE MEETING for the participants of Passive Safety 2024

PROGRAMME on Friday, 22nd of March 2024

13th international symposium on PASSIVE SAFETY of RAIL VEHICLES in Berlin / Germany

◎ 08:30 - 09:00 CHECK-IN-TIME: Come together / Exhibition / Networking Coffee #6

PASSIVE SAFETY, CRASHWORTHINESS AND INTERIOR DESIGN: NATIONAL MARKETS AND INTERNATIONAL PERSPECTIVES

Dipl.-Volkswirt Eckhard **SCHULZ** (Managing Director); [BAHNVERBAND e.V.; IFV Bahntechnik; Berlin / Germany]

CAB SEAT ZONE ASSESSMENT:

APPLICATION OF GM/RT2100 TO DEVELOP A CAB SEAT ZONE

Dipl.-Ing. Arts et Métiers (ENSAM) Dominique **LE CORRE** (Crash Discipline Leader - CCN / Rolling Stock Engineering); [ALSTOM S.A.; Haguenau / France]

A CASE STUDY ON THE TYPE APPROVAL OF CRASH SAFETY FOR RAILWAY VEHICLES IN KOREA: EXPERIENCES WITH EN 15227 IN KOREA

Jinsung **KIM**, Ph.D. (Principal Researcher, Railroad Accident Research Department); [Korea Railroad Research Institute, Republic of Korea] {and} Baehwa **LEE** (Principal Researcher, Structure Design Research & Development Team); [Hyundai-Rotem Co., Republic of Korea]

◎ COFFEE BREAK

Networking time and exhibition PASSIVE SAFETY

#7

EVALUATION OF LEG INJURY TO RAIL PASSENGER OCCUPYING WALKOVER SEAT IN A TRAIN ACCIDENT

Dr. Eng. Kazuma **NAKAI**, (Senior researcher); [Railway Technical Research Institute; Ergonomics Laboratory, Human Science Division; Tokyo / Japan] {and} Shota **ENAMI**, M.Sc. (Assistant senior researcher); [Railway Technical Research Institute; Tokyo / JAPAN]

SEVERAL IMPACT TESTS AND FE ANALYSES TO CONSTRUCT FE MODEL OF ALUMINUM ALLOY RAILWAY CARBODY STRUCTURE

Keisuke **NAGATA**, M.Sc. (Assistant Denior Researcher); [Railway Technical Research Institute; Kokubunji city / Japan] {and} Tomohiro **OKINO**, Ph.D. (Senior Chief Researcher, Head of vehicle & Bogie Parts Strength Lab.); [Railway Technical Research Institute; Kokubunji city / Japan]

◎ LUNCH BREAK

Networking time and exhibition PASSIVE SAFETY

#8

SPEED-DEPENDENT RESPONSE MODEL OF RAILWAY COUPLING BUFFERS USING DEEP NEURAL NETWORKS

Junhyeok **HWANG**, cand. Ph.D. (Researcher); [Korea University of Science & Technology - KRRI - Korea Railroad Research Institute; Daejeon / Korea] - et al.

IMPROVED CRASH MANAGEMENT SYSTEM

Roger **DANIELSSON** (CEO); [GREEN BUFFERS AB; Avesta / Sweden] {and} Torsten **DYBECK** (Senior Researcher / Mechanical Engineering); [Green Buffers AB, Avesta / Sweden]

◎ COFFEE BREAK

Networking time and exhibition PASSIVE SAFETY

#9

THE USE OF DIGITAL TWINS IN PASSIVE SAFETY

David **GRIFFITHS** (Global Product Manager); [OLEO International (Engineering); Coventry / UK] {and} Dr. Terry **WILLIAMS** (Director of Research); [DigitalTrains; Coventry / UK] - et al.

MULTIDIRECTIONAL BREAKAWAY CONNECTION FOR CATENARY POLES

Michalis **HADJIOANNOU**, Ph.D., P.E. (Project Engineer); [Protection Engineering Consultants; Dripping Springs, Texas / U.S.A.] {and} Eric **SAMMARCO**, Ph.D., P.E., F.SEI; [Protection Engineering Consultants]

THE FUTURE OF PASSIVE SAFETY: PASSIVE SAFETY OF RAIL VEHICLES 2024 AND BEYOND: DERIVATIONS FOR FUTURE RESEARCH PROJECTS

Dipl.-Volkswirt Eckhard **SCHULZ**; [THINK TANK RAILWAY SAFETY; Berlin / Germany] {and} Dipl.-Ing. Gerhard M. **SCHMIDT**; [Advisory Board, Railway-Association.eu] and [Siemens AG; Krefeld / Germany]

◎ End of the programme of the OFFICIAL PROGRAMME & FINAL NETWORKING (#10)

DEPARTURE TIME WILL BE (APPROX.): 16:15 ~ 16:30

#PS2024 - Programme brochure 2024-03-18 - Version 7.3 (update) *** The programme may be subject to alterations. *** The spoken word applies! The terms and conditions (www.ifv-servicegesellschaft.de/download/agb.pdf) are binding for all contracts with the organiser.

GENERAL INFORMATION:

Date of the symposium: 21st- 22nd of March 2024

Applications are welcome before 14th of March (final deadline)

VENUE:

Hotel Steglitz International, Berlin (<https://www.si-hotel.com>)

MORE INFORMATION:

www.passive-safety-symposium.info

WHAT?

Programme

The complete **PROGRAMME** of the 13th International Symposium **PASSIVE SAFETY of RAIL VEHICLES 2024 - #PS2014**

may be found online on the new conference homepage.

Conference language: English for presentations and publications

Check for updates of the programme, exhibitors and speakers list:

>>> **www.passive-safety-symposium.info**

HOW?

Application

DEADLINE FOR PARTICIPANT APPLICATION:

Thursday, 14th of March 2024

The mandatory APPLICATION FORM is available either on the conference website:

>>> **www.passive-safety-symposium.info**

or request your ticket directly in the new online **WebShop**

WHERE?

Venue

HOTEL recommendation for the symposium **PASSIVE SAFETY*** in Berlin-Steglitz is the **Hotel Steglitz International**.

The complete list of hotels at the venue is available for registered participants. → Please ask the organiser BAHNVERBAND e.V. (Team Event-Management) for assistance.

* Participants need a **check-in-card** to enter the conference rooms.

Registered participants will receive their **check-in-card** by e-mail or at the check-in-counter (after completing the payment process).

QUESTIONS?

Ask the Organiser

CONTACT the organiser

Railway-Symposium★info

BAHNVERBAND e.V. (Railway-Association.eu) in Cooperation with IFV Beratung und Service / HdV Service GmbH

Fregestr. 67, 12159 Berlin

Phone: +49(0)30 39720171 (Mr. Schulz, Managing Director, CEO)

Phone: +49(0)30 39720172 (Ms. Heyer, Event Management)

Phone: +49(0)30 39720170 (General Information, Payment)

E-mail: tagung@bahnverband.info or event@ifv-bahntechnik.de

VISIT!

Exhibition

The **EXHIBITION** takes place during the symposium **PASSIVE SAFETY 2024** (21st - 22nd of March 2024 in Berlin).

Please ask for BRONZE, SILVER or GOLD packages for exhibitors or PLATINUM package for GENERAL sponsoring partnership.

The official list of EXHIBITORS and SPONSORING PARTNERS will be updated regularly on the conference homepage:

>>> **www.passive-safety-symposium.info**

READ!

Publication

The **PROCEEDINGS** of the recent **PASSIVE SAFETY symposia** are available as printed books (published by IFV BAHNTECHNIK).

PASSIVE SAFETY 2024 = 280,00 EURO

PASSIVE SAFETY 2019 = 240,00 EURO

PASSIVE SAFETY 2017 = 210,00 EURO

All available publications (PROCEEDINGS 2005 - 2024)

may be ordered directly from the publisher - (not via amazon!):

ORDER FORM >>> **www.passive-safety-symposium.info**

APPLICATION FORM FOR CONFERENCE PARTICIPANTS

PASSIVE SAFETY 2024

THREE EASY STEPS FOR YOUR QUICK REGISTRATION PROCESS:

1. In order to be registered as a participant we ask you to book your ticket before 14th of March 2024. Please fill in the registration form and send it to BAHNVERBAND e.V. Berlin / Germany via e-mail or request your ticket online in the new WebShop.
 2. As soon as your registration form has arrived we will return a written confirmation of application and an invoice to the e-mail address you have stated. You will also receive a list of RECOMMENDED HOTELS at the venue for your convenient booking.
 3. The conference fee is due at the time of registration and has to be paid completely before 14th of March 2024. Only participants with valid check-in-card are allowed to enter the conference rooms and to join the symposium (and also the exhibition hall).
- * The documents mentioned above will be sent to you by mail or via e-mail. Therefore we kindly ask you to state a valid e-mail address on the registration form. Attached to the e-mail you will also find addresses of recommended hotels and the directions to the conference venue. If you have any questions - just contact the organising team at BAHNVERBAND e.V. - (www.Railway-Association.eu)!

Herewith I declare my binding participation in the symposium >>> PASSIVE SAFETY 2024 <<< on 21st - 22nd of March 2024 in Berlin. The fee is due at the time of registration. I agree with the terms and conditions of the organiser (www.bahnverband.info/download/agb.pdf).

Please send the completed and signed APPLICATION FORM via e-mail >>> email@bahnverband.info or >>> tagung@bahnverband.info

PARTICIPANT:

☐ Mr / ☐ Ms NAME: _____
Company (Dept.): _____
Street: _____
ZIP Code, City, Country: _____
Telephone / Cellular: _____
E-mail: _____
(YOUR VALID E-MAIL-ADDRESS IN CAPITAL LETTERS)
Billing Address: _____
UID-number: _____

The participant will receive extensive conference materials - including the printed proceedings PASSIVE SAFETY 2024. To promote the networking activities of participants and speakers, the evening event (Berlin by night) is already included.

Complete payment must be received before 14th of March 2024. in case of problems with bank transfer, delegates may pay on site (+100 € fee).

☒ 1499,- EURO PARTICIPANT TICKET [standard price]

Regular participant ticket includes entrance for both conference days of PASSIVE SAFETY 2024 and the evening event [inclusive lectures, conference catering, conference proceedings (value of the printed book: 280 EURO), VAT]. ALL PARTICIPANT FEES have to be paid via bank transfer or via credit card (using extra payment service) before 14th of March 2024 to avoid an additional fee of 100 EURO because of a delayed payment handling.

REDUCED FEE / MEMBER TICKET / VIP TICKET *

- ☐ 1299 EURO* Reduced fee ticket for corporate members of BAHNVERBAND e.V.
☐ 1349 EURO* Reduced fee ticket for personal members of BAHNVERBAND e.V.
☐ 1249 EURO* Reduced fee ticket for co-speaker, co-author or VIP-guests of the sponsoring partners

* Reduced fee has to be paid before 30th of February 2024 (in case of delay the REGULAR PRICE has to be paid on site)

➔ Preferred payment method: ☐ Bank Transfer ☐ Credit Card (plus 3 % € extra payment service fee for external service)
➔ SPONSORING-PACKAGES: ☐ Bronze: 500 €; ☐ Silver: 1500 €; ☐ Gold-Sponsor: 3000 €; ☐ Platin (+Plus)

>>> Date / Signature: ☒

<<<

Payment Conditions: Advance Payment: Please notice that your personal check-in-card will be activated after the payment process is finished. In case of delayed or incomplete payment the regular registration fee plus an extra handling fee of 100 € will be charged when paying cash on site. Complete fee has to be paid before entering the conference rooms. Notice the deadline for early bird payment.

Cancellation conditions: Regular cancellation is possible only 4 weeks before the conference begins. Cancellation fee: 150 €. In order to avoid any cancellation fees, we recommend to nominate a substitute from your company - **completely free of charge!**

Do you have any questions? ➔ PLEASE CONTACT THE ORGANISER:

>>> Managing Director: Mr. Schulz (CEO) - phone: +49(0)30 81898731 - cell phone: +49(0)17670094803
>>> Participant registration (Ms. Heyer): +49(0)30 39720172 - Payment and accounting department: +49(0)30 39720170
>>> E-mail: tagung@bahnverband.info or event@ifv-bahntechnik.de

This is the conference brochure version V2: 06th of February 2024 - The programme may be subject to alterations! - For updates, please visit >>> www.bahnverband.info/passive-safety

DEADLINE FOR PARTICIPANT APPLICATION: 14th of March 2024