

## Information and Invitation

12<sup>th</sup> international symposium

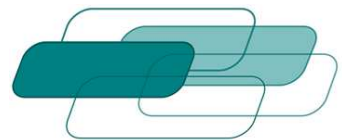
### PASSIVE SAFETY of RAIL VEHICLES

CONFERENCE DATE:  
9<sup>th</sup> - 10<sup>th</sup> of May 2019

*Deadline for your application:  
30<sup>th</sup> of April 2019*



BAM



**ifv Bahntechnik**

Interdisziplinärer  
Forschungsverbund  
Bahntechnik e.V.

Interdisciplinary  
Railway Research  
Association

Welcome to Berlin!

12<sup>th</sup> international symposium

## PASSIVE SAFETY of RAIL VEHICLES

**Berlin,  
9<sup>th</sup> - 10<sup>th</sup> of May 2019**

[www.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

Your application as participant or exhibitor is very welcome!

*APPLY NOW to join the symposium and the exhibition with all advantages of systematic networking!*

*Official partners of the exhibition PASSIVE SAFETY 2019*



*ready for YOUR  
registration*

**The WORLD CONFERENCE  
on PASSIVE SAFETY  
of RAIL VEHICLES**



BAM



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✓ **SYMPOSIUM**

✓ **EXHIBITION**

✓ **NETWORKING**

[www.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

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

During the 12<sup>th</sup> symposium in May 2019 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 wagons 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 symposium PASSIVE SAFETY is important for you!**

### 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, 9<sup>th</sup> - 10<sup>th</sup> of May 2019

### REGULATIONS

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

### WORKSHOP / THINK TANK

- \* Crash Energy Management
- \* Interior Equipment
- \* Economic Impact

## PROGRAMME on Thursday, 9<sup>th</sup> of May 2019

12<sup>th</sup> international symposium on PASSIVE SAFETY of RAIL VEHICLES

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

### PASSIVE SAFETY OF RAIL VEHICLES 2019 - Opening speech

N.N. - [Interdisciplinary Railway Research Association] and Dipl. Ing. Dr. habil. Alois **STARLINGER** - [Advisory Board, IFV BAHNTECHNIK e.V.]

### INNOVATION AND MARKET TRENDS IN PASSIVE SAFETY - INTRODUCTION OF THE EXHIBITION PARTNERS #PS2019

Dipl.-Volkswirt E. **SCHULZ** - Managing Director - [IFV BAHNTECHNIK e.V.] and N.N.

### RECOMMENDATIONS FOR THE FRONT-END DESIGN FOR TRAMS AND LIGHT RAIL VEHICLES WITH RESPECT TO PEDESTRIAN SAFETY:

A new Technical Report Issued by CEN TC 256 Working Group 2

Dipl. Ing. Dr. habil. Alois **STARLINGER** - Member of the Group Executive Board, Head of Vehicle Authorization, Structural Analysis & Testing - [Stadler Rail Group, Altenrhein / Switzerland]

© COFFEE BREAK Networking time and exhibition PASSIVE SAFETY #2

### ASPECT OF FRONT END TRAM DESIGN WITH RESPECT TO PEDESTRIAN SAFETY:

Currently prepared legislation focused on contact body and vehicle and recommendations (Kinematics of collision, friction Injury criteria, typical impact velocity from analysis, test of glass as an important part of new trams)

Roman **JEŽDÍK** - [VÚKV a.s., Prague / Czech Republic] and Dr.-Ing. Zdenek MALKOVSKY - [VÚKV a.s.]

### LESSONS IN PASSIVE SAFETY FROM THE TRAM ACCIDENT AT SANDILANDS (2016):

The Sandilands accident: crashworthiness investigation; lessons in passive safety and RAIB recommendations  
Dominique **LOUIS** - Inspector of Rail Accidents - [Rail Accident Investigation Branch, Derby, United Kingdom]

© LUNCH BREAK Networking time and exhibition PASSIVE SAFETY #3

### FINITE ELEMENT ANALYSIS OF WORKSTATION TABLE SLED TEST TO EVALUATE ENERGY-ABSORPTION REQUIREMENTS

Dr. Shaun **ESHRAHGI** - [United States Department of Transportation, Volpe, The National Transportation Systems Center, Department Structures and Dynamics, Cambridge, MA / USA] et al.] and Kristine **SEVERSON**, M. Sc. - Senior Mechanical Engineer - [U.S. Department of Transportation, Volpe Center, USA]

### CRASH SAFETY PERFORMANCE OF TALENT 2 TRAINS:

Crash Concept, Real Accidents, Case Study

Dipl.-Ing. Thomas **FECSEKE** - [Bombardier Transportation; Center of Competence for Crash Safety; Hennigsdorf / Germany etc.]

© COFFEE BREAK Networking time and exhibition PASSIVE SAFETY #4

### PASSIVE SAFETY 2019 and beyond: Requirements for the next generation of safe rail vehicles SPEAKER PANEL and EXHIBITION PARTNERS

### IMPROVEMENT OF PASSIVE SAFETY: Relevant challenges for future research projects

N.N. - Think tank Railway Technology / Working group PASSIVE SAFETY [optional]

© 16:30 (approx.) End of the programme of the FIRST CONFERENCE DAY

## EVENING EVENT #PS2019

Sightseeing Tour plus  
Networking-Dinner #5  
BERLIN BY NIGHT



The Networking Event is supported by the  
SPONSORING PARTNER of the symposium:

**STADLER**

## PROGRAMME on Friday, 10<sup>th</sup> of May 2019

12<sup>th</sup> international symposium on PASSIVE SAFETY of RAIL VEHICLES

© 08:45 - 09:15 CHECK-IN-TIME: Come together / Exhibition / Networking Coffee #6

**PASSIVE SAFETY 2019:** Interdisciplinary Railway Research (Interdisciplinary, Innovative, International)  
Dipl.-Volkswirt E. SCHULZ - CEO - [Interdisciplinary Railway Research Association, Berlin / Germany]

### ACCIDENT ANALYSES OF ALUMINIUM CAR BODIES IN COLLISIONS OF SCENARIO TYPE 3

Benedetto CASTELLI - [Stadler Rail Group]; Andreas GMÜR - [Stadler Rail Group]; Dipl. Ing. Dr. habil. Alois STARLINGER - Member of the Group Executive Board, Head of Vehicle Authorization, Structural Analysis & Testing - [Stadler Rail Group, Altenrhein / Switzerland]

**CRASHWORTHINESS IN VERY LIGHT RAIL: Design of a Very Light Rail vehicle for On-Street Operation:**  
(lessons learnt from recent accidents for Very Light Rail and future course of action on standards for Very Light Rail; compliance with highway and rail standards; challenge existing standards with bus standards)  
Shubham SHARMA, Beng Aerospace Engineering (Hons.) - [University of Warwick, Coventry / United Kingdom]

©NETWORKING-BREAK Networking Coffee and Exhibition PASSIVE SAFETY #7

**EXPERIMENTAL VERIFICATION OF EFFECT ON REDUCING THE SEVERITY OF INJURY TO PASSENGERS OCCUPYING LONGITUDINAL SEATS USING HANDRAILS DURING A TRAIN COLLISION:**  
Sled test, severity of passengers injuries and effect on reducing the severity of injury  
Dr. Kazuma NAKAI - [Railway Technical Research Institute, Ergonomics Laboratory, Human Science Division, Tokyo / Japan]

**EVALUATION AND ANALYSIS OF PASSIVE SAFETY PERFORMANCE FOR NEW TRAIN COMMERCIAL FRONT CABIN:** Simulation of the response of the hybrid III 50-percentile dummy in the secondary collision by using the non-linear finite element method  
Wen LIU, Master - [Beijing Jiaotong University, School of Mechanical, Electronic and Control Engineering, Beijing / P. R. China]

©NETWORKING-BREAK LUNCH / Networking Coffee / Exhibition PASSIVE SAFETY #8

**ECONOMIC IMPACT: ARE CRASHWORTHY VEHICLES WORSE IN EVERYDAY SERVICE?**  
Interactive Workshop - Expert Discussion  
Dipl.-Ing. Gerhard M. SCHMIDT - Senior Eng. - [Siemens Mobility GmbH, Krefeld / Germany]

**PASSIVE SAFETY 2019: Lessons learned concerning passive safety of railway vehicles**  
Dipl.-Volkswirt E. SCHULZ - CEO - [IFV BAHNTECHNIK e.V., Berlin / Germany] et al.  
\*\*\* final panel discussion and concluding remarks \*\*\*

**DEVELOPMENT OF CRASH ENERGY MANAGEMENT: relevant challenges for future projects**  
N.N. - Think tank Railway Technology / Working group PASSIVE SAFETY - task group crashworthiness [opt.]

**IMPROVEMENT OF INTERIOR EQUIPMENT: relevant challenges for future projects**  
N.N. - Think tank Railway Technology / Working group PASSIVE SAFETY - task group interior equipment [opt.]

© 15:00 ~ 15:30 End of the programme of the SECOND CONFERENCE DAY  
FINAL NETWORKING (#9) or THINK TANK RAILWAY TECHNOLOGY (optional)  
DEPARTURE TIME will be (approx.): ~ 15:30

EXHIBITION PASSIVE SAFETY (9<sup>th</sup> and 10<sup>th</sup> of May 2019)



**The WORLD CONFERENCE  
on PASSIVE SAFETY  
of RAIL VEHICLES**

YOUR COMPANY LOGO  
as exhibition partner

#PS2019

Ask for EXHIBITION PARTNERSHIP → [email@ifv-bahntechnik.de](mailto:email@ifv-bahntechnik.de)

## PATRONAGE

### of 12<sup>th</sup> symposium **PASSIVE SAFETY** of RAIL VEHICLES



*Dear community members,*

*passive safety of rail vehicles has proven the benefit in several accidents the last years. Further improvement will be the topic of the actual symposium.*

*But there is a new challenge.*

*The environmental impact of traffic all over the world is not acceptable any more. Railways can contribute to the improvement, but only if the marketshare is increased significantly, not only some few per cent per year, but increase of a two digit per cent per year is needed.*

*For many reasons infrastructure cannot grow as fast as market share must increase.*

*Much more trains on the same infrastructure will be the result.*

*Of course active safety must increase, but also passive safety will have to cope with a higher safety risk in the future than today, just by much more trains.*

*Lets take this new demand proactive.*

*Prof. Dr.-Ing. Markus HECHT*

**TECHNICAL UNIVERSITY BERLIN**  
**CHAIR for RAIL VEHICLES**





## EXHIBITORS and OFFICIAL SPONSORING PARTNERS PASSIVE SAFETY of RAIL VEHICLES 2019

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**Visit the WORLD CONFERENCE  
and the EXHIBITION  
on PASSIVE SAFETY  
of RAIL VEHICLES  
Berlin, 9 - 10 May 2019**

### How to become an OFFICIAL PARTNER of PASSIVE SAFETY:

- |   |   |
|---|---|
| <input type="checkbox"/> Bronze-Sponsor | (LOGO)  |
| <input type="checkbox"/> Silver-Sponsor | (ADVERTISEMENT + ONE PARTICIPANT-TICKET inclusive)                      |
| <input type="checkbox"/> Gold-Sponsor   | (LOGO + ADVERTISEMENT + EXHIBITION + TWO PARTICIPANT-TICKETS inclusive) |

**Phone: +49(0)30 81898731 or e-Mail: [redaktion@ifv-bahntechnik.de](mailto:redaktion@ifv-bahntechnik.de)**

#### Acknowledgement:

The 12<sup>th</sup> symposium PASSIVE SAFETY is organised in friendly cooperation of IFV BAHNTECHNIK e.V. (CONFERENCE), IFV Beratung und Service GmbH (EXHIBITION) and TU Berlin, FG Schienenfahrzeuge (PATRONAGE) and many PASSIVE SAFETY EXPERTS as consulting partners and / or members of the PROGRAMME COMMITTEE.  
Bundesanstalt für Materialforschung und -prüfung allowed to use the BAM conference hall in Berlin Adlershof for the PASSIVE SAFETY 2019 - thank you very much for supporting #PS2019!

## GENERAL INFORMATION:

**Date of the symposium: 9<sup>th</sup> - 10<sup>th</sup> of May 2019**

**Applications are welcome before 30<sup>th</sup> of April**

VENUE:

Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin  
english

Conference language:

ONLINE INFORMATION:

[www.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

## WHAT?

### Programme

The complete **PROGRAMME** of the 12<sup>th</sup> International Symposium PASSIVE SAFETY of RAIL VEHICLES 2019 - #PS2019 may be found online on the conference homepage:

>>> [www.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

(check for updates of the programme)

## HOW?

### Application

#### DEADLINE FOR PARTICIPANT APPLICATION:

Wednesday, **30<sup>th</sup> of April 2019**

The mandatory APPLICATION FORM is available on the conference website:

Download → [www.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

## WHERE?

### Venue

**HOTEL recommendation** for the symposium PASSIVE SAFETY\* in Berlin-Adlershof.

The complete list of hotels at the venue is available for registered participants. → Please ask the organiser IFV BAHNTECHNIK 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** of the symposium PASSIVE SAFETY: IFV Bahntechnik e.V. (Interdisciplinary Railway Research Network) Salzufer 17 - 19 / SG20, 10587 Berlin - Fax: +49(0)30 31425452 Phone: +49(0)30 39720171 (Mr. Schulz, Managing Director, CEO) Phone: +49(0)30 39720172 (Ms. Heyer, Event Management) Phone: +49(0)30 39720170 (Ms. Brossmann, Payment) E-mail: [office@railway-network.eu](mailto:office@railway-network.eu) or [event@ifv-bahntechnik.de](mailto:event@ifv-bahntechnik.de)

## VISIT!

### Exhibition

The **EXHIBITION** takes place during the symposium **PASSIVE SAFETY 2019** (9<sup>th</sup> - 10<sup>th</sup> of May 2019 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.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

## READ!

### Publication

The **PROCEEDINGS** of the PASSIVE SAFETY symposia are available as PRINTED BOOKS (published by IFV BAHNTECHNIK).

**PASSIVE SAFETY 2019** - printed proceedings available for 1250 €  
**PASSIVE SAFETY 2017** / >200 pages / ISBN 978-3-940727-55-8  
**PASSIVE SAFETY 2015** / 228 pages / ISBN 978-3-940727-48-0  
**PASSIVE SAFETY 2013** / 330 pages / ISBN 978-3-940727-36-7

All available PUBLICATIONS from our BOOKS IN PRINT LIST may be ordered directly from the publisher - (not via amazon!):

>>> ORDER FORM: [www.ifv-bahntechnik.de/literatur.pdf](http://www.ifv-bahntechnik.de/literatur.pdf)

# APPLICATION FORM FOR CONFERENCE PARTICIPANTS

## PASSIVE SAFETY 2019

### THREE STEP REGISTRATION PROCESS:

1. In order to be registered as a participant we ask you to send a binding registration before 30<sup>th</sup> of April 2019. Please fill in the registration form and send it to IFV BAHNTECHNIK e.V. Berlin / Germany via fax or e-mail. (Do not forget your signature!).
  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 3<sup>rd</sup> of May 2019.** 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 as well as via e-mail. Therefore we kindly ask you to state your 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 IFV BAHNTECHNIK e.V. - ([www.Railway-Research-Association.eu](http://www.Railway-Research-Association.eu))!

**Herewith I declare my binding participation in the symposium >>> **PASSIVE SAFETY 2019** <<< on 9<sup>th</sup> - 10<sup>th</sup> of May 2019 in Berlin. The fee is due at the time of registration.**

**I agree with the terms and conditions of the organiser ([www.ifv-bahntechnik.de/agb.pdf](http://www.ifv-bahntechnik.de/agb.pdf)).**

**Please send the completed and signed APPLICATION FORM via e-mail >>> [tagung@ifv-bahntechnik.de](mailto:tagung@ifv-bahntechnik.de) or Fax >>> +49(0)30 31425452 (respectively +49(0)700 47472000).**

#### 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 2019. To promote the networking activities of participants and speakers, the evening event (Berlin by night) is already included.

**Complete payment must be received before 3<sup>rd</sup> of May 2019.** in case of problems with bank transfer, delegates may pay on site (+100 € fee).

### ☒ 1350,- EURO PARTICIPANT TICKET (standard price)

**Regular participant ticket includes entrance for both conference days of PASSIVE SAFETY 2019 and the evening event [inclusive lectures, conference catering, conference proceedings (value of the printed book: 1250 EURO), VAT].**

**ALL PARTICIPANT FEES have to be paid via bank transfer or via credit card (using extra payment service) before 3<sup>rd</sup> of May 2019 to avoid an additional fee of 100 EURO because of a delayed payment handling.**

### REDUCED FEE / MEMBER TICKET / VIP TICKET \*

☐ 1250 EURO\* Reduced fee ticket for corporate members of IFV BAHNTECHNIK e.V.

☐ 1300 EURO\* Reduced fee ticket for personal members of IFV BAHNTECHNIK e.V.

☐ 1150 EURO\* Reduced fee ticket for co-speaker, co-author or VIP-guests of the sponsoring partners

\* Reduced fee has to be paid **before 30<sup>th</sup> of April 2019** (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)

➔ SPONSORING-PACKAGES: ☐ Bronze: 500 €; ☐ Silver: 1500 €; ☐ Gold-Sponsor: 3000 € (plus VAT)

>>> Date / Signature: \_\_\_\_\_



<<<

**Payment Procedure:** 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 (BEFORE THE CONFERENCE BEGINS). Complete fee has to be paid before entering the conference rooms.

**Cancellation conditions:** Regular cancellation is possible **6 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 (Ms. Brossmann): +49(0)30 39720170

>>> E-mail: [event@ifv-bahntechnik.de](mailto:event@ifv-bahntechnik.de) or [tagung@ifv-bahntechnik.de](mailto:tagung@ifv-bahntechnik.de) - Fax: +49(0)30 31425452 or Fax +49(0)70047472000

This is the conference programme version V2: 29<sup>th</sup> of March 2019 - The programme may be subject to alterations! - For updates, please visit >>> [www.ifv-bahntechnik.de/passive-safety](http://www.ifv-bahntechnik.de/passive-safety)

**DEADLINE FOR PARTICIPANT APPLICATION: 30<sup>th</sup> of April 2019**