# ICRI Workshop at the IHHA 2023 conference

AUGUST 27, 2023 Rio de Janeiro, Brasil









Richard Stock
Global Head of Rail Solutions
Plasser & Theurer
rstock@plausa.com







## Steering Committee

Co-chairs:

**Richard Stock Stephen Lewis** 

Plasser Canada / American **British Steel** 

**Committee Members** 

Roger Lewis

Andy Vickerstaff

David Fletcher

**Briony Croft** 

Peter Klauser

Peter Mutton

Klaus Six

Edwin Vollebregt

Sheffield University

London Underground

Sheffield University

**Independent Consultant** 

Independent Consultant

Monash University

Gordon Bachinsky Advanced Rail Management

Virtual Vehicle

Loram

Kevin Oldknow

Sylvie Chenier

Eric Magel

Saeed Nia

Anders Ekberg

Carlos Casanueva

Adam Bevan

Binbin Liu

Sebastian Stichel

Simon Fraser University

National Research Council, Canada

National Research Council, Canada

National Research Council, Canada

Chalmers University

**KTH University** 

Huddersfield University

Milan Politech

KTH University

Queensland
Huddersfield DELFT
Chalmers UIUC Sheffield
Virginia Tech Southampton Graz
Istanbul Monash NCL CQU NTNU
MCL Universities SFU
IPN Swindon SWJTU KTH Rutgers
Florence UTFPR Lorraine Alberta
Warwick Tuskegee Leoben
Manitoba SWJTU UFES
BJTU Leeds

Transport Canada
US-FRA Trafikverket

# Government Consultants

P.Klauser J.Kalousek N.Hooper, D.Eadie, F.Naser B.Kerchof G.Wolf, M.Roney, O.Polach

415+ persons33 countries200+ organizations

ArcelorMittal
BNSF CN CP CSX FTC
NS UP TSR FEM RUMO
Transnet VALE MRS
Rumo SNCF KiwiRail

### Railroads

Network Rail BART BCRTC
GCRTA Banedanmark Lucknow
Amtrak DB TTC Sound Transit
TFL SBB Banedanmark
Calgary

## ICRI-RCF

Athena
LORAM Sumitomo
LINMAG LBFoster Rohmann
Intl Engineering MRX Holland
Voest Alpine Sentient Sciences Evraz
ARM KLD Industry NSSMC
Siemens Standard Steel SERSA WID
British Steel Enekom CH Vidon
Simmons Vossloh Molycop
Whitmore Fuchs ENSCO
Andian

AAR-MxV CARS (China)

NRC Canada VOLPE RTRI

## Research Laboratories or consortia

RSSB/VTSIC Virtual Vehicle
VNIIZhT

Argentina Australia Austria

Brazil Canada

China

Colombia Denmark

Ethiopia

France

Germany

India

Italy

Japan

Jordan

Malaysia

Mexico

Morocco

Netherlands

New Zealand

Norway

Peru

Poland

Russia

Serbia

Saudi Arabia

South Africa

Sweden

Switzerland

Thailand Turkey

United Kingdom

USA

https://www.icri-rcf.org/membership-registration/



Partners Home Projects Upcoming Events ICRI Workshop Downloads Contact Members Forums Registration Member Login Register Username \* Email \* Password \* Type password Here Retype password Here First Name \* Last Name \* Position \* Organization/Company \*

https://www.icri-rcf.org/projects/



HOME



**UPCOMING EVENTS** 

ICRI WORKSHOP

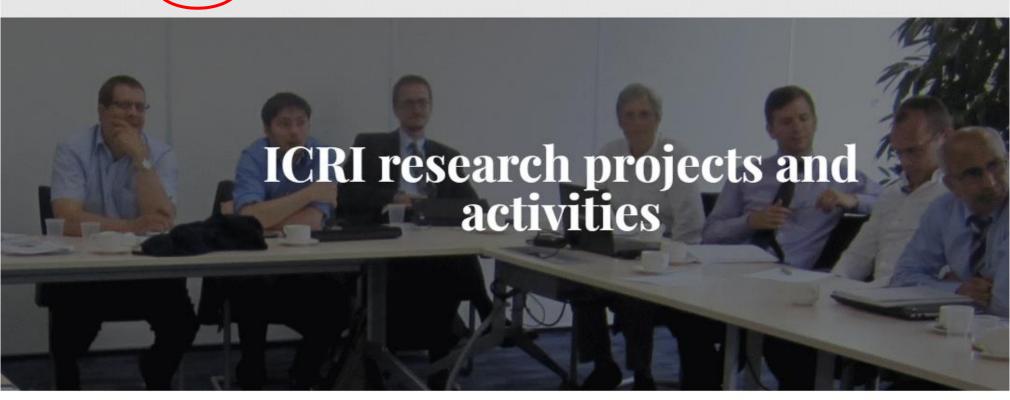
DOWNLOADS

PARTNERS

CONTACT

MEMBERS ~

FORU



## **ICRI Projects**

Friction Studies

Quantify Surface Damage

Wear Mapping

Damage Modelling

Safety VTI Economics Profile Scoring

## https://www.icri-rcf.org/downloads/



HOME PROJECTS UPCOMING EVENTS ICRIV

**ICRI WORKSHOP** 



PARTNERS

CONTACT

MEMBERS ~

**FORUMS** 

## ICRI Downloads

#### Melbourne 2022 ICRI Mini Workshop downloads

· Workshop Presentations

#### Vancouver 2022 ICRI Mini Workshop downloads

- · Workshop Presentation
- · Athena Presentation

#### Ottawa 2022 ICRI Workshop downloads

- Workshop Program
- Keynote by Dan Hampton / CSX
- Presentations Day 1 (zip file)
- Presentations Day 2 (zip file)
- Presentations Day 3 (zip file)

#### Vancouver 2019 ICRI workshop downloads

- Presentations Day 1 (zip file)
- Presentations Day 2 (zip file)
- Presentations Day 3 (zip file)
- Summary Document

ICRI Webinar on Experimental study on wear and RCF damage of wheel/rail materials under complex environment conditions (13APR22)

- Presentation
- · Meeting recording

ICRI Webinar on Analytical Estimation of Impact Forces Due to Abrupt and Rapid Changes in Track Profile at Rail Ends and Turnout Crossings (02MAR22)

- Presentation
- · Meeting Recording

ICRI Webinar on Long- and Short-term effect of Top of Rail Friction Modifiers (TORFM) on Traction (26JAN22)

- Presentation
- · Meeting Recording
- JRC2021-1050\_TORFM Study\_Virginia Tech
- Test Rig Video

ICRI Webinar on Quantifying friction modifier effects on roughness and corrugation growth (14DEC21)

Presentation

HOME

**PROJECTS** 

UPCOMING EVENTS ICRI WORKSHOP

DOWNLOADS

**PARTNERS** 

CONTACT

MEMBERS ~

**FORUMS** 

#### 28th IAVSD International Symposium on Dynamics of Vehicles on Roads and Tracks. August 21-25, 2023, Ottawa, Canada

The IAVSD Symposium on Dynamics of Vehicles on Roads and Tracks is a leading international symposium bringing together researchers, scientists and engineers from academia and industry in the field of ground vehicle dynamics to present and exchange their latest ideas and breakthroughs.

The biennial IAVSD Symposia have been held in internationally renowned locations and this event will, for the second time, take place in Canada. The organisers of this Symposium are the National Research Council of Canada, Virginia Tech and Carleton University.

The Symposium will also offer an opportunity to participants to visit interesting places and to observe road and rail operations and advanced technologies in National Capital Region of Canada.

For more information please see: IAVSD 2023

#### ICRI Ottawa Workshop at IAVSD. August 24, 2023, Ottawa, Canada

The ICRI presents a one-day workshop in Ottawa during the IAVSD conference. For more Information on the workshop please visit here.

For more information on IAVSD please see above.

#### 12th International Heavy Haul Conference (IHHA 2023). 27 - 31 August 2023 in Rio de Janeiro, Brazil

The International Heavy Haul Association (IHHA), in partnership with MRS Logistics railway, will be hosting its 12th International Heavy Haul Conference, on 27 – 31 August 2023 in Rio de Janeiro, Brazil.

The Theme for this conference is: Application of Heavy Haul Innovations for a Sustainable World.

# Upcoming ICRI workshops

September 2024: Vienna Austria – more information to come



HOME

**PROJECTS** 

UPCOMING EVENTS

ICRI WORKSHOP

**DOWNLOADS** 



MEMBERS ~

**FORUMS** 

## Sponsoring Partners



Transport Canada





National Research Council Canada Conseil national de recherches Canada







## **Key Technical Partners in Alphabetical Order**

- Advanced Rail Management (USA)
- American Railway Engineering and Maintenance-of-Way Association (USA)
- Bay Area Rapid Transit (USA)
- Burlington Northern Santa Fe Railroad (USA)
- Canadian Pacific Railway
- Central Queensland University Centre for Railway Engineering (Australia)
- CN Transportation
- Chalmers University (SWEDEN)
- CSX Transportation (USA)
- Deutsche Bahn AG
- Federal Railroad Administration (USA)

# Workshop Sponsor – Thank you!!!



# Today's program

start time	Sunday August 27th, Morning	Presenter
8:00	Coffee served	
8:30	Welcome, workshop outline, Intro to ICRI	Richard Stock (Plasser USA)
9:00	Decreasing of derailments after gauge face electronic lubricators installation	Adriano Magalhaes Freitas (Rumo)
9:30	Modelling rail wear	Eleir Mundim Bortoleto (Vale Institute of Technology)
10:00	Rail base breaks: One of the most concerns for Brazilian Heavy-Haul railways	Eric Pretti and Gabriel Viegas (Vale's Carajas Railway)
10:30	Coffee break	
11:00	Case study: Effects of the lack of rail grinding on the rail maintenance	Henrique Carou Costa (Metro Rio)
11:30	Case study: Turnout performance under heavy haul traffic – challenges and initiatives	Simone Issomura (BHP Australia)
12:00	General Discussion, Needs / open topics, wrap-Up	Richard Stock (Plasser USA)
12:30	End of Workshop	

1:30 Afternoon IHHA Session starts