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ISWIM
International Society for Weigh in Motion

ISWIM NEWSLETTER

Message from the ISWIM president

Welcome to the summer edition of the ISWIM Newsletter for 2025.

Here in North America, the weather is still hot but schools are back in session and the summer days are getting a little shorter.

The ISWIM community has been working on some great initiatives such as the development on a new Continuous Calibration WIM system soon to be tested in the United States and a fully automated overload enforcement system in Kazakhstan that issues fines for trucks in violation of weight limits.

The ISWIM Young Researcher Award Committee selected two winners for the 2025 Young Researcher Award. The winners along with the other competition participants will submit their work at a webinar on August 28. More information about the winners and webinar are on the following page.

Finally, ISWIM has been working on the next international conference (ICWIM 10) which will be held in Ljubljana, Slovenia in May 2027. More information will be provided in the fall newsletter. For now, enjoy reading the full articles about the items briefly mentioned in this message and the other good work being done by others worldwide.

Thank you for your support and contributions to the WIM community both within your organization and ISWIM.

Remember, the ISWIM Newsletter is your newsletter. So, keep the articles coming about your research initiatives, programs, and ideas for advancing WIM technology.

Deborah Walker, President of ISWIM

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Young Researcher Award 2025

We are excited to announce the winners of the ISWIM Young Researcher Award 2025! This award recognizes outstanding contributions from students and early-career professionals in the field of Weigh-In-Motion. From system calibration and data analysis to infrastructure assessment and traffic safety, this year's submissions showcased impressive innovation and passion for advancing WIM technologies. Congratulations to the awardees, whose work is helping to shape the future of WIM research and application:

Chan Yang is a Bridge Engineer at HNTB Corporation with a Ph.D. in Civil Engineering and her paper, "Impact of Truck Load on Bridge Decks Based on WIM Data," was selected for award. She specializes in WIM data analytics, reliability-based bridge code calibration, and developing site-specific live load models and load factors.

In the USA Chan has significantly contributed to nationally recognized research initiatives, including NCHRP 12-123 (Load Rating of Segmental Bridges), NCHRP 12-127 (Load Rating of Long-Span Bridges), and the FHWA-funded Truck Platooning Impact on Bridges Phase II study.

She has also participated in state Department of Transportation projects, such as the Bridge Resource Project funded by NJDOT. Chan also actively engages in designing and load rating tasks involving steel bridges, complex truss structures, and other sophisticated bridge systems.

Doron Hekič is a PhD student at the University of Ljubljana, Faculty of Civil Engineering, and a researcher at the Slovenian National Building and Civil Engineering Institute (ZAG). His PhD-related work focuses on the application of Bridge WIM systems for Structural Health Monitoring of bridges.

He began working with WIM technology in 2018 during an internship at ZAG, continuing into his master's thesis on dynamic amplification under traffic loads. Since 2019, he has been involved in various research and industry projects related to bridge inspections, assessments, monitoring, vibration monitoringand developing of the Bridge-WIM (B-WIM) system.

His PhD research, titled "Using aBridge Weigh-in-Motion System for Structural Health Monitoring of Bridges," explores how B-WIM data can support finite element model updating for assessing bridge condition.

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Disclaimer

The projects described, ideas shared, and claims made in this Newsletter do not necessary represent the official view or position of ISWIM.

While care has been taken in the preparation of the content of this Newsletter, ISWIM accepts no responsibility in its use, for any omission, or damage that may be caused and does not endorse any specific product or result presented in the Newsletter.

ISWIM Website

Please visit the official ISWIM website: www.is-wim.**net**. Here you will find information on our society, all Newsletters, past ISWIM Events, the Guide for Users of WIM and links to our all Vendors & Consultants.

New is our online, searchable library with over 450 articles, papers and reports related to Weigh-In-Motion.

ISWIM LinkedIn Group

The ISWIM LinkedIn Group is another way of staying connected with the latest developments in WIM.

In this group, researchers, end-users and vendors can find and post short articles on initiatives, new projects, test results, or other developments related to WIM-technology, applications and data.

The ISWIM LinkedIn Group has currently more than **625** members. If you want to join, please visit:
linkedin.com/groups/13400438

Coming ISWIM Events

ISWIM Young Researcher Webinar.

In this webinar, participants of the 2025 ISWIM Young Researcher Award will present their work. The webinar will be held, on August 28th 2025 from 09:00-11:00 AM EST. Participation is free of charge and registration is not required. To join the webinar just use this <link> with Meeting ID: 283 905 171 944 8 and Passcode: hW3uR7EA. The agenda topics are:

Time	Speaker	Topic
09:00	Sylwia Stawska, USA	Intro to ISWIM Young Researcher Award.
09:10	Chan Yang, USA	Impact of Truck Load on Bridge Decks Based on WIM Data.
09:30	Widi Nugraha, Indonesia	B-WIM Statistical Analysis Unveiling Extreme Live Load Effects on Indonesian Bridges.
09:50	Doron Hekic, Slovenia	Using a Bridge WIM system for Structural Health Monitoring of Bridges.
10:10	Binyam Wesenseged, Ethiopia	Safety Assessment of Reinforced Concrete Highway Bridges for Overloading Vehicles Using WIM Data.
10:30	Muhammad Arslan Khan, Ireland	Development of a Tamper-Proof Onboard Weighing System for Road Freight.

■ Sylwia Stawska | SVStawska@modjeski.com

CVSA-ISWIM Workshop.

This workshop will focus on the latest developments in the applications of WIM for weight enforcement. The workshop will be Sunday September 21st 2025 starting at 08:00 AM EST, right before the CVSA Annual Conference in Denver, Colorado, USA.

The workshop will kick off with an introduction to Weigh-In-Motion and the applications of WIM data specifically for weight enforcement. In addition, the latests developments in the USA will be presented followed by a number of show case projects from ISWIM Vendors. The workshop will conclude with a panel discussion on the sharing of WIM data. You can join the workshop in person or virtually via an ZOOM-link. The link will be sent to you after registering (free of charge) for the workshop at: CVSA-ISWIM-Workshop Registration. For more information on the conference please visit: www.cvsa.org/events/cvsa-annual-conference-and-exhibition/.

■ Kevin Andrews | kevin.andrews@cvsa.org

■ Hans van Loo | hans.vanloo.int@gmail.com

ISWIM Board (elected Nov. 2023)

Executive Board:

- Deborah WALKER, United States **President ISWIM**
- Gustavo OTTO, Brazil **Vice-President Science**
- Matija MAVRIČ, Slovenia **Vice-President Vendors**
- Aleš ZNIDARIČ, Slovenia **Treasurer**
- Chris KONIDITSIOTIS, Australia **General Secretary**
- Andrew LEES, Great Britain **Information Officer**

Board Members:

- Gerhard DE WET, South Africa
- Vittorio DOLCEMASCOLO, France
- Bernard JACOB, France
- Steven JESSBERGER, United States
- Rish MALHOTRA, Canada
- Sylwia STAWSKA, United States
- Eugene O'BRIEN, Ireland
- Jonathan REGEHR, Canada
- Victor Joaquin VARGAS ARCE, Bolivia

Vendors & Consultants College:

- Matija MAVRIČ, Slovenia
- Christoph KLAUSER, Switzerland
- Rish MALHOTRA, Canada

Promotion Officer:

- Hans VAN LOO, Switzerland

Kazakhstan's HS-WIM for Direct Enforcement

Kazakhstan has become a notable example in the deployment of high-speed WIM (HS-WIM) systems for fully automated overload enforcement. This success is the result of strategic technology choices and a focus on long-term reliability. The primary goal is to protect road infrastructure from overloaded trucks without disrupting traffic - requiring a solution that combines high accuracy, climate resilience, and compliance with legal standards. Following a thorough evaluation, Kazakhstan selected Intercomp's strain gauge strip sensors for the majority of its HS-WIM installations. These sensors demonstrated long-term calibration stability, durability, and reliable performance under Kazakhstan's demanding environmental conditions. The system was officially certified by the Kazakhstan Institute of Standardization and Metrology.

Intercomp's strain gauge strip sensors in Astana, Kazakhstan

The implementation brought together local expertise and international know-how. In collaboration with Automatic Systems (Kazakhstan) and APM Pro (Poland), an integrated solution was developed that includes measurement reliability analysis and full automation of violation detection and fine issuance.

Legislation enacted in December 2024 enabled the full automation of overload enforcement. Once a violation is detected, a fine is automatically issued, and the notification is sent electronically. In the first few days of operation, over 300 violations were recorded — some with loads exceeding legal limits by up to twice the allowed weight.

By 2025, following a successful pilot project with HS-WIM checkpoints at the entrances to the capital, Astana, more than 100 HS-WIM lanes have been deployed across the country, playing a pivotal role in reducing and controlling vehicle overloading. Kazakhstan's approach demonstrates how well-chosen technology, supportive legislation, and skilled execution can result in a scalable, fair, and highly effective weight enforcement system.

■ **Leonardo Guerson** | leonardog@intercompcompany.com

ISWIM Vendors

APM	www.apm.pl
Axtec	www.axtec.co.uk
Betamont	www.betamont.sk
CAMEA	www.cameatechnology.com
Captels	www.pesage-captels.com
Cestel	www.cestel.eu
Ciemsa	www.ciemsa.com.uy
Cross	www.cross.cz
Dynaweigh	www.dynaweigh.com
Excel Technology	www.exceltech.com.au
FardEU	www.fardeu.com
GEC Scales	www.gecscales.com
Girwim	www.girwim.com
Intercomp	www.intercompcompany.com
iWIM	www.iwim.it
Kistler	www.kistler.com
Mikros	www.mikros.co.za
Mettler Toledo	www.mt.com/wim
Neurosoft	www.neurosoft.pl
Osmos	www.osmos-group.com
Q-free	www.q-free.com/products
Quarterhill	www. quarterhill.com
Rekor	www.rekor.ai
Sterela	www.sterela.fr
TDS	www.traffic-data-systems.net
Traffic Lines	www.traffic-lines.de
Tramanco	www.tramanco.com.au
VanJee Technology	www.wanji.net.cn

Interested to join the ISWIM Vendors, just contact:

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■ **Hans van Loo** | hans.vanloo.int@gmail.com

Intelligent Access for Freight

Intelligent Access (IA) is a concept that leverages data from freight vehicles and transport companies to align road usage with general regulations or specific conditions set by National Road Authorities (NRAs). The objective of IA is to ensure "the right vehicle with the right load on the right road at the right time," utilizing and improving various digital services on private and public side. Focuspoints are monitoring and control of the actual axle loads and routes of Heavy Goods or High Capacity Vehicles (type N3 >12t). This is an addition or substitute for Road or Bridge WiM and road side inspections. By combining the data the overal quality can also be improved. That should be in the interest of the ISWIM community.

The Conference of European Directors of Roads (CEDR) has commissioned research into how this can be further explored through its Transnational Research Road Programme. The aim of this research is to explore how IA can help NRAs optimise infrastructure use and promote environmentally sustainable road freight transport.

The main output will be identifying scenarios where IA can be applied to manage cross-border road transport, highlighting opportunities and challenges for road authorities and other stakeholders. The research will also provide guidelines and recommendations for the implementation of results. This will enable CEDR members to choose an application of IA that fits their national context for cross-border transports for specific groups in road freight transport, specific corridors, and/or specific vehicle configurations

The current participating NRAs are Finland, Ireland, the Netherlands, Norway, and Sweden. These members form a Programme Executive Board (PEB), comprising experts in relevant topics, to steer the programme. IA can help NRAs by optimising the use of road infrastructure and promoting sustainable freight transport. The ongoing digital transformation in NRAs and the logistics sector provides opportunities to enhance road monitoring and control access to road use.

Specific 'Work Packages' include establishing the 'Building Blocks' for an IA Framework utilising a systematic review process, developing IA Scenarios and road maps and assessing those scenarios in the context of digitisation and automation. The project commenced in May 2024 and is scheduled to finish in Spring 2026.

The ISWIM community or some of its members might be interested to discuss the risks and opportunities. Chris Koniditsiotis joint the advisory Board on 8 July. If others also want to be involved they can contact:

■ **Paul Davison** | paul.davison@aecom.com

■ **Marcel Otto** | marcel.otto@rws.nl

Coming Events
(subject to change)

ISWIM Young Researcher Webinar
28 August 2025
Virtual Event
www.is-wim.net

ITS World Congress
Annual Conference and Exhibition
24-28 August 2025
Atlanta, Georgia, USA
www.itsamericaevents.com

Commercial Vehicle Safety Alliance (CVSA)
Annual Conference and Exhibition
21-25 September 2025
Denver, Colorado, USA
www.cvsa.org

Saudi Intermobility Expo
Riyadh, Saudi Arabia
1-3 December 2025
www.informaconnect.com/saudi-intermobility-expo/

TRB Annual Meeting
Washington D.C., United States
11-15 January 2026
www.nationalacademies.org

ISWIM Board Meeting
Washington, D.C., USA
January 2026
www.is-wim.net

Intertraffic Amsterdam
10-13 March 2026
Amsterdam, The Netherlands, Brazil
www.intertraffic.com

Southern African Transport Conference (SATC)
Pretoria, South Africa
6-9 July 2026
www.satc.org.za

National Land Transportation Agency (ANTT)
4th Regional Seminar on WIM
November 2026
Brasilia, Brazil
www.gov.br/antt and www.iswim.net

ICWIM-10, 10th International Conference on Weigh-In-Motion
9-13 May 2027
Ljubljana, Slovenia
www.is-wim.net

Do you know other WIM-related events? Please contact:
■ **Hans van Loo** | hans.vanloo.int@gmail.com

Continuous Calibration WIM to be deployed in Nebraska

Quarterhill's Continuous Calibration WIM (CCWIM) technology will soon be used at key sites across the state of Nebraska in the USA. In partnership with state authorities, Quarterhill will upgrade the eastbound and westbound weigh station sites at Waverly, North Platte, and Nebraska City, bringing this advanced calibration technology to a crucial part of the region's Commercial Vehicle Operations (CVO) network.

CCWIM is a solution that automatically calibrates Weigh-In-Motion (WIM) systems by leveraging weight data collected from static scales. This eliminates the need for manual calibration and ensures consistent, accurate weight measurements for all vehicle types and speeds. This rich data set has value to users beyond use at the weigh stations by providing highly accurate truck weight information for long periods to road designers and traffic planners.

iSINC and SLC WIM Scale at Nebraska City Westbound Preclearance

The deployment of CCWIM at these six strategically located sites will enhance sorting efficiency, reduce enforcement bottlenecks, and improve the overall effectiveness of Nebraska's CVO infrastructure.

The upgrades at Waverly, North Platte, and Nebraska City weigh stations will ensure seamless integration of the CCWIM system. The enhancements will include the deployment of iSINC WIM electronics for mainline monitoring and compliance, static scale integration with the operator software to enable automated calibration, and advanced camera systems for matching WIM data with static scale records. These improvements will create a closed-loop calibration system that operates continuously in the background, ensuring long-term accuracy and operational efficiency.

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ISWIM Consultants

Corner Stone	www.corner-stone-int.com
FIMAU	www.FIMAU.com
NMi	www.nmi.nl
RTS GmbH	doupal@hispeed.ch
Static Motion	www. staticmotion.co.za

Interested in joining the ISWIM Consultants, just contact:

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ISWIM Guide for Users of WIM

The ISWIM Guide for Users of Weigh-In-Motion serves as a basic, yet comprehensive introduction to Weigh-In-Motion. The Guide covers different aspects related to the working, specifying, buying, installing, testing, maintaining and using of WIM systems and data. To enhance accessibility for users starting with WIM, these topics are described in easy-to-understand language.

This document covers different aspects related to the working, specification, purchase, installation, testing, operation and maintenance of WIM systems, and the application of the data they produce. A PDF version of the WIM User Guide can be downloaded at the ISWIM website: www.is-wim.net.

■ Hans van Loo | hans.vanloo.int@gmail.com

Kistler's WIM System supports long-term protection of Düsseldorf's bridge

The Josef-Kardinal-Frings-Brücke, a nearly 100-year-old vital connection between Düsseldorf and Neuss, is currently undergoing extensive rehabilitation due to structural wear and bearing damage. To safeguard the bridge's integrity and avoid a full closure, which would significantly impact thousands of daily commuters and regional logistics, authorities imposed a 7.5-ton weight limit in October 2024.

Despite these restrictions, many overweight trucks continue to cross, accelerating the bridge's deterioration. Traffic load models estimate that a single 40-ton truck causes as much wear as approximately 60,000 passenger cars.

Kistler's Lineas sensors installed on the Josef-Kardinal-Frings-Brücke

To support effective monitoring and enforcement of the weight limits, eight high-precision Lineas sensors were installed across two lanes in April 2025. Kistler's KiTraffic Basic Weigh In Motion system provides continuous, real-time measurement of vehicle weights and axle loads, delivering crucial data for traffic management and infrastructure protection.

As NRW's Minister for the Environment, Oliver Krischer, emphasized: *"Renovations and replacement constructions are a priority for us to prevent closures and to ensure that economic activity and people's mobility can continue uninterrupted."*

Kistler's solution enables decision-makers to better understand traffic loads, helping preserve the bridge's structural integrity and maintain sustainable mobility throughout the ongoing rehabilitation, scheduled through spring 2026 and beyond.

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Guide on Calibration of WIM Systems

The latest addition to the series of ISWIM Practitioners' Guides is the guide on the "**Calibration of WIM Systems**". This guide has been developed by a group of ISWIM volunteers and is aimed to assist WIM contractors and transportation agency personnel involved in field WIM equipment calibration. In addition, road owners responsible for developing WIM programs may find this document useful in establishing their specific requirements for a successful WIM operation.

ISWIM Practitioners' Guides

This document will offer recommendations based on proven best practices and published documentation for conducting a successful WIM calibration for in-road and bridge WIM technologies. The purpose of this document is to provide step-by-step procedures to perform an initial or routine calibration of WIM equipment installed for high-speed WIM data collection to support highway monitoring and transportation statistics.

This guide should be used only for systems that are for general traffic monitoring, statistical applications and WIM pre-selection. This guide is not aimed at systems used for legal metrology applications such as direct enforcement and does not circumvent any available standard WIM specifications.

The ISWIM Practitioners' Guide has recently been published and is available via the ISWIM website: www.is-wim.net

■ **Andy Lees** | andyleeswork@talktalk.net
■ **Deborah Walker** | deborah.walker@dot.gov

ISWIM Workshop at SATC

On July 10th as part of the 43th annual Southern African Transport Conference (SATC) and in cooperation with SATC, ISWIM organized a WIM workshop at the CSIR Convention Centre in Pretoria, South Africa. The objective of the workshop was to offer an overview of the latest developments in the applications of WIM technology to the southern African audience. This year's special focus was the implementation of WIM for direct weight enforcement in general and on SANRAL's (South African National Roads Agency Ltd.) initiative for direct enforcement (the WIMe project).

The programme of the workshop consisted of a mix of presentations on the latest developments in South Africa and the rest of the world. Combined with concrete examples of successful implementations of WIM systems by ISWIM vendors and end-users. The workshop saw more than 50 participants mainly from South Africa and other southern African countries. The program consisted of 12 presentations and was completed with a panel discussion. The presentations and video recordings of the workshop are available at the ISWIm website (www.is-wim.net/events).

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