

ISWIM
Vision for the Future

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Introduction

The "ISWIM Vision for the Future" is an initiative by the International Society for Weigh-In-Motion (ISWIM) designed to strategically align and advance global research on weigh-in-motion (WIM) technology and the application of WIM data. Through this vision, ISWIM aims to provide guidance for the research efforts of universities and other research institutes. By doing so, ISWIM strives to align international research efforts on critical areas of WIM technology, optimise the use of limited research resources, and avoid redundancy in research initiatives.

This vision has been developed by the board of ISWIM and incorporates the input from our three membership groups: Researchers, End-Users and Vendors forming the international WIM community. This vision is a dynamic document that will be periodically updated considering the views expressed through continuous dialogue with our membership base to ensure their insights and needs are included in this vision.

The initiative not only seeks to direct and refine WIM research focus but also ensures that such research leads to tangible improvements in technology application and societal outcomes, fostering a more integrated, innovative and impactful future for WIM technology and its stakeholders.

More information on ISWIM can be found at www.is-wim.net.

Objective

This vision for the future seeks to inspire innovation and mobilise research communities by providing a clear and ambitious research agenda for WIM technologies and the application of WIM data that aligns with the broader goals of the industry and societal needs.

Our Society

The International Society for Weigh-In-Motion (ISWIM) is an international non-profit organization, founded in 2007, legally based in Switzerland. It is an international network of and for people and organisations active in the field of Weigh-In-Motion (WIM). Membership of ISWIM is free of charge for individual members.

Purposes

The purposes of ISWIM are:

- To support advances in and the more widespread use of WIM technologies and the applications of WIM data.
- To disseminate knowledge and understanding of WIM by organising conferences, seminars, training courses and other events.
- To promote and support international research and development projects on WIM.
- To initiate or participate in the development of standards relating to WIM and its applications.

Contact

Website: www.is-wim.net

LinkedIn: Groups/13400438/

Strategic Research Topics:

- WIM for Direct Enforcement: Enhancing the technical, legal and regulatory frameworks needed to implement WIM systems for the direct, automatic enforcement of overloading by heavy goods vehicles.
- WIM Data Assessment: Improving the accuracy and reliability of WIM data by checking various aspects that determine the quality of WIM data to increase the usability of data.
- WIM Data and Measurements for Bridge Assessment: Advancing measurement techniques and methods for the structural safety assessment and health monitoring of existing bridges.
- WIM Data for Road Engineering: Integrating new practices in the application of WIM data in the engineering of road pavements and bridges as part of the design and maintenance of the road infrastructure.
- WIM Data for Road Safety: Developing new solutions to enhance road safety by detecting potential safety risks on trucks, such as missing, under-, or overinflated tires.

Disclaimer:

This vision is not intended to replace any existing documents related to the research and development of WIM technologies and applications of WIM data. ISWIM provides suggestions as a source of inspiration and a means to stimulate discussion and innovation across diverse aspects of WIM technology. Researchers are encouraged to explore these topics as they see fit, tailoring their studies to their unique interests, capabilities and the specific demands of their local contexts.

While ISWIM will continue to support the WIM community by providing a platform for knowledge exchange, networking and professional growth, the decisions regarding specific research directions remain at the discretion of the individual researchers and their supporting institutions. ISWIM does not have the position nor the ambition to coordinate or finance international WIM research efforts.

ISWIM
International Society for Weigh in Motion

Importance of WIM

A WIM system provides detailed vehicle weight information and is a critical data source for highway infrastructure owners, direct enforcement agencies, and researchers.

The weight information consists of the gross vehicle weight and axle (group) loads combined with other parameters such as date and time, location, speed and vehicle class.

This weight information provides the user with detailed knowledge of the loading of heavy goods vehicles. This knowledge will replace the assumptions and estimates that had previously been used; as a result, margins of uncertainty are reduced.

This means, for example, that the match between the heavy goods vehicles and the road infrastructure can be optimised. This leads to more efficient goods transportation and better economic infrastructure management and productivity.

WIM technology is becoming increasingly important in sectors such as the design and maintenance of road and rail infrastructure, trans-portation efficiency and traffic safety.

There is a growing need to streamline research efforts and focus on topics that offer the most significant potential for advancements in WIM technology and its real-world applications.