



Mohsen Morshedi BSc MSc

Winner of the 2026 Raghar Wighus Award

From where does your interest in fire safety engineering derive?

Mohsen: My interest in fire safety started when I was 19 during my first internship. While I was working on a study in the library of an oil refinery, I came across an NFPA code. I became curious and started reading it. That was the first time I realised how much science and engineering are involved in understanding and preventing fire. That experience motivated me to learn more and eventually led me to build my career in fire safety engineering.

On your first day at university, did you know that you would be writing your master thesis about water mist?

Mohsen: No, not on my first day. However, the idea was already in my mind. Before joining Ghent University, I had worked for several years in active fire protection, mainly with water-based fire suppression systems. I wanted to build on that experience through academic research. When I found out there was a master's thesis topic on water mist systems, I applied for it without hesitation. It felt like a natural step because it matched both my professional experience and my interest in advancing my knowledge in this field.

How was your interest in water mist aroused?

Mohsen: My interest in water mist grew from my experience with sprinkler systems

and interest in more sustainable fire protection solutions. What attracted me most was that water mist can achieve effective fire suppression while using much less water than traditional sprinkler systems. Additionally, it reduces the impact on buildings through the use of smaller pipework. That was the main reason I wanted to learn more about it. Coming from a country with many historical buildings, I was also impressed by its value in protecting heritage buildings, where reducing water damage is just as important as controlling the fire. Combining effective fire protection with better preservation of valuable assets made water mist a very interesting research topic for me.

Seems like you have lived in Ghent / Belgium during your university time. What was it like for you there? What was the atmosphere like on campus?

Mohsen: Yes, I lived in Ghent for two years during my master's studies, and I have particularly good memories of that time. Ghent has a lively and youthful atmosphere because of its many students and universities. You can really feel the city's energy and passion for learning.

At Ghent University, I enjoyed the combination of the modern facilities at the Technology Park and the historic campus buildings in the city centre. Today, at SOCOTEC I have a colleague who also studied at Ghent University, and we often talk about our experiences at various festivals in Ghent. Those conversations always bring back good memories.

Have you been to other universities before you graduated?



Mohsen Morshedi in conversation with IWMA President Max Lakkonen.

Mohsen: I studied at three different universities in total. I completed two bachelor's degrees at two universities in my home country, Iran. Later, I moved to Belgium to pursue my master's degree at Ghent University. Studying in different academic environments gave me different perspectives and helped me to grow both personally and professionally. Looking back, each university contributed something valuable to my education and shaped the way I approach engineering today.

How was the time during which you wrote your thesis? How will you look back at it in years to come?

Mohsen: Writing a master's thesis is always challenging, and mine was no exception. Some days, I struggled to write even a single paragraph. Since my research was based on numerical modelling, I conducted more than 150 simulations and processing all that data was often the most demanding part. There were no established empirical or semi-empirical correlations to guide me,

so I had to build my approach step by step. I used the results of each model to improve the next one. I was fortunate to have the support and guidance of Prof Beji and Prof De Mulder throughout this journey. Looking back, this experience taught me patience, persistence and the importance of continuous learning.

What do you think are the great advantages of the water mist technology?

Mohsen: Every fire suppression system has its own advantages, and the most suitable solution depends on the specific application. For water mist technology, the

main benefits are sustainability and the reduced water storage requirements compared with traditional water-based systems. During several projects working at SOCOTEC, I have noticed that clients appreciate the smaller tank size and reduced pipework requirements, particularly where space is limited. Another aspect I value is its wide range of applications, from residential buildings to schools, hotels, car parks, shops, storage facilities, data centres and machinery spaces. At the same time, understanding the limitations and appropriate applications of water mist is an important part of the design process. ▶

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Mohsen Morshedi with Prof. Tarek Beji at the International Water Mist Conference in Antwerp.

What do you think will the future of water mist look like?

Mohsen: Compared with other water-based fire protection systems, water mist is still a young and innovative technology. I believe the introduction of EN 14972 and its various parts will support the wider application of water mist systems in the UK in the future. Previously, there were limitations due to the availability of guidance and test data, but the development of new standards is helping to provide a clearer framework for its application. I would not be surprised to see more buildings using water mist systems in the coming years. Furthermore, during the previous IWMC, I learned that the water mist industry is actively



Mohsen Morshedi with colleagues at SOCOTEC UK & Ireland.

adapting to emerging fire risks, particularly those associated with electric vehicles.

Discussions on full-scale fire tests for EV car parks highlighted the ongoing efforts to understand these challenges and develop suitable fire protection solutions. I am looking forward to seeing the latest findings and how they may influence the future application of water mist systems in this area.

What are your personal plans for your future regarding your career?

Mohsen: My future plans are focused on continuous development in the field of fire safety engineering. I would like to strengthen my connections with other experts in water mist technology by working closely with the IWMA community. At the same time, I aim to continue improving my technical skills so I can provide better support to the projects we are working on at SOCOTEC. I am also interested in continuing my thesis research and exploring how it can be expanded to a wider range of applications. I see my career as a continuous learning journey, where I can grow as an engineer and contribute positively to the fire safety community.

Will water mist be a part of your future?

Mohsen: A big yes, for sure. I am excited to continue working on water mist projects in the future. I believe water mist is an innovative engineering solution with great potential, especially in applications where traditional approaches may not be the most suitable option. It can provide additional flexibility in performance-based design projects and create new possibilities for fire protection solutions. Recently joining the IWMA and my role at SOCOTEC both align very well with this plan, as they provide me with opportunities to further develop my knowledge and experience with this technology and be involved in different water mist projects. So, my answer is definitely yes. 



For more information, go to www.iwma.net



25th International Water Mist Conference

Prague, Czech Republic

7th and 8th October 2026

www.iwma.net/iwmc

