



Association for
Computing Machinery

ACM WEB CONFERENCE STEERING COMMITTEE

PRESS RELEASE

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The ACM Web Conference Steering Committee Selects “LINE: Large-scale Information Network Embedding” for the 2026 Seoul Test of Time Award

*Research published in 2015 to be recognized by the ACM Web Conference Steering Committee
for 10 years of profound impact on the field.*

Dubai, July 2026 – The ACM Web Conference Steering Committee announced today that the 2026 Seoul Test of Time Award will be presented to the authors of the paper [“LINE: Large-scale Information Network Embedding”](#) by Jian Tang, Meng Qu, Mingzhe Wang, Ming Zhang, Jun Yan and Qiaozhu Mei.

The award will be presented during the opening ceremony of the 35th international conference in the ACM Web Conference series (formerly known as International World Wide Web Conference, abbreviated as WWW), hosted by the team in Dubai. See: <https://www2026.thewebconf.org/> for details.

The paper was first presented at the 24th International World Wide Web Conference in Florence, Italy in May 2015. It now has over 7,100 citations and was deemed the winner on technical merits and impact.

Marc Najork, Chair of the Seoul Test of Time Award Committee, said:

This paper presents a seminal advancement in graph and network embeddings. The LINE algorithm proposed by the authors learns low-dimensional representations of billion-vertex scale graphs in time linear to the number of edges, whereas earlier methods had substantially worse time complexity. Moreover, unlike earlier methods which focused on first-order proximity between vertices, LINE also captures second-order proximity between vertices – that is, vertices with many shared neighbors are similar to each other. The LINE algorithm presented in this paper was a key enabler for applying graph-based machine learning methods to large scale information networks, and it strongly influenced subsequent research in the field.

Dick Bulterman, Chair of ACM Web Conference Steering Committee said:

Each year, an independent committee with the Web Conf Steering Committee selects a paper that during the past decade has made a significant contribution of the Web community. Generously funded by the organizers of the WWW2014, this year's winner is a great example of how timeless research results can be. The work of Jian Tang and colleagues, focusing on fundamental network graph problems, shows that fundamental research can achieve results that have a lasting impact far beyond its initial publication date. It is a great example that serves as an inspiration to current researchers, whether young and or established. Congratulations!

Jian Tang, Meng Qu, Mingzhe Wang, Ming Zhang, Jun Yan and Qiaozhu Mei. Authors, comments:

We are deeply honored and grateful to receive the Seoul Test of Time Award 2026 for LINE. Network embedding—learning low-dimensional vector representations of nodes—was a fundamental challenge in the mid-2010s, as many real-world networks were too large for traditional spectral or factorization methods

to handle at scale. Our work introduced a straightforward yet effective approach: first-order and second-order proximity preservation through negative sampling. We proposed that by optimizing the local neighborhood structure efficiently, we could capture both direct connections and multi-hop relationships in a single representation space. This simple principle proved both scalable and robust. We are also happy to see LINE contributes to the foundation for many follow-up works in network embedding.

About the Seoul Test of Time Award

Inaugurated in 2014, the Seoul Test of Time Award is made possible by the generous contribution of the organisers of WWW2014 held in Seoul, South Korea, in May 2014. It is awarded annually to the author or authors of a paper presented at a previous World Wide Web conference that has, as the name suggests, stood the test of time.

The first award, presented at WWW2015 in Florence, was made to Google founders Sergey Brin and Larry Page, for their world-changing paper “The Anatomy of a Large-Scale Hypertextual Web Search Engine,” originally presented at the World Wide Web Conference in Brisbane in 1998.

About the Web Conference

Since its first event, in 1994 at CERN, the Web Conference (formerly the World Wide Web or WWW Conference) has provided scientists, researchers, policy makers, activists and technology industry leaders with the forum to discuss the evolution of Web and its impact on business, culture and society. From 1994 the conference was organized each year by a local team of volunteers in different parts of the world in collaboration with the International World Wide Web Conference Committee (IW3C2) which managed the conference series.

In 2022, IW3C2 handed over, the Web Conference management of the Web Conference series to the Association for Computing Machinery (ACM) and it became a full ACM conference

About ACM

ACM, [the Association for Computing Machinery](https://www.acm.org/), is the world’s largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field’s challenges. ACM strengthens the computing profession’s collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.