**Digital Twins based Framework for Sporting Event**

**计算机学院学术报告**

**报告题目**：Digital Twins based Framework for Sporting Event

**报告人**： Prof. El Saddik，加拿大渥太华大学

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会议ID: 992 6574 8151密码: 8tq0Yh

**邀请单位：**计算机科学与技术学院

**Abstract:**A digital twin is a digital replication of a living or non-living physical entity. By bridging the physical and the virtual worlds, data is transmitted seamlessly allowing the virtual entity to exist simultaneously with the physical entity. A digital twin facilitates the means to monitor, understand, and optimize the functions of the physical entity and provides continuous feedback to improve quality of life and wellbeing of citizens in smart cities.

Real-world events such as soccer games (football) generate a massive amount of multimedia data on social network with live. The multimedia data generated (text, images, memes, videos) is loaded with the sentiment, opinions, and reactions of the fans towards the events during the game. The extensive amount of data makes the search for any speciﬁc useful information a time-consuming endeavor. In this talk, we will discuss first the convergence of multimedia technologies (AR/VR, AI, IoT, BigMM Data and 5G-Tactile Internet) towards the digital twin then we will present a personalized event-related data summarization system which generate a comprehensive overview of the game in terms of what happened and how people reacted at the time. We will conclude by describing the challenges and the open research questions.

**Biography:**

 Prof. Abdulmotaleb El Saddik served as a Distinguished University Professor and University research Chair in the School of Electrical Engineering and Computer Science at the University of Ottawa. He is an internationally recognized scholar who has made strong contributions to the knowledge and understanding of intelligent multimedia computing, communications and applications. His research focus is on the establishment of digital twins to enhance the quality of life of citizens using AI, IoT, SN, AR/VR, haptics and 5G to allow people to interact in real-time with one another as well as with their smart digital representations in a secure manner.

He is the designated Editor-in-Chief (starting Feb. 2022) of the ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM), Senior Associate Editor of IEEE Multimedia (IEEE MM), and Guest Editor for several Transactions and Journals. He has co-authored 10 books and more than 600 publications and chaired more than 50 conferences and workshops and has supervised more than 150 researchers. He has received research grants and contracts totaling more than $20M. He is the author of the book Haptics Technologies: Bringing Touch to Multimedia.

 Dr. El Saddik is a Fellow of the Royal Society of Canada, Fellow of IEEE, Fellow of the Canadian Academy of Engineering and Fellow of the Engineering Institute of Canada. He is an ACM Distinguished Scientist and has received several awards, including the Friedrich Wilhelm Bessel Award from the German Humboldt Foundation, the IEEE Instrumentation and Measurement Society Technical Achievement Award. He also received IEEE Canada C.C. Gotlieb (Computer) Medal and A.G.L. McNaughton Gold Medal for important contributions to the field of computer engineering and science and the 2021 IEEE TCSC Achievement Award for Excellence in Scalable Computing.