

CHINA-CHILE ONLINE EDUCATION WEEK



TOPIC

IMPROVING QUALITY OF EXPERIENCE FOR VIDEO STREAMING WITH AI AT NETWORK EDGE



TIME

09:00-10:00 (Santiago, Chile)

20:00-21:00 (Beijing, China)

November 27

/ ABSTRACT /

Over Internet, video content has consumed more than 80% bandwidth. In many countries like China, the number of users watching long- or short-form videos has exceeded 600 millions. However, the high-speed mobile access network, congested backbone network, and under-construction edge networks cannot fulfill the demands in video streaming from Internet users. Hence, it is still challenging to improve the quality of experience of watching a video online. To address the problem, it is promising to have artificial intelligence (AI) techniques for enhancing the video streaming services, e.g., to predict the popularity of video content in future, to characterize the dynamics of network bandwidth, and to analyze the user behaviors. Key enabling techniques includes video content caching, dynamic bit rate selection, super-resolution, object detection, which support better quality of experience for video content consumers in the era of 5G and beyond.



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Dr. Kaigui Bian is an associate professor in Computer Science at Peking University, Beijing. He was a visiting researcher at Microsoft Research Asia in 2013. He is a senior member of IEEE, and a member of ACM. His research interests include wireless networking, mobile computing, and network security. He received six best paper awards of international conferences. He was awarded the

Peking University Teaching Excellence Award in 2014, and the Tsang Hin-chi Teaching Excellence Award in 2017. He was the recipient of IEEE Communication Society Asia-Pacific Board (APB) Outstanding Young Researcher Award in 2018. He is an IEEE Communication Society Distinguished Lecturer for 2020-2021. He serves as an Editor for IEEE Transactions on Vehicular Technology and IEEE Access.

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