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I AM SPEAKING AT:

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ONLINE EVENT

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Abstract: Shenzhen has been developing dynamically since its establishment in 1980. Now, Shenzhen ranks the fifth in population density and the nineteenth in GDP all over the world. In recent years, large scale infrastructure projects continued to start one after another in this mega city. Especially, the underground transportation infrastructure goes beneath the aged districts put the surrounding community, including a large number of old buildings and infrastructures, in risk.

Chunfeng Tunnel Project is one representative mega infrastructure. This project is constructed by shield method, with the diameter of 15.8m, which is the largest shield machine in China. The tunnel is 5.08km long and directly passes through 1 river and 29 buildings, affecting 79 buildings and 9 bridges. Generally speaking, the construction of Chunfeng tunnel is of great technical difficulty and high safety risk.

This presentation will introduce the risk management practice of this mega infrastructure project, including the static, but comprehensive, risk assessment before construction, risk visualization via laser scanning and tilt photography, intelligent risk management system applying advanced information and communications technologies (ICT), and the dynamic risk management through this intelligent system. The practice shows us that the systematic risk management using ICTs greatly improve the safety condition of this project as well as the surrounding communities.