

## Title: Software Defined Networking and Smart ID Networks

**Abstract:** The original design for the current Internet features three bindings, resource and location, user and networks, and control and data. This 70-year-old mechanism is facing critical challenges to fit the significant changes and development of today's Internet. We have witnessed many effort in this aspects, such as the recently emergence of Software Defined Networks, which separates control and data compared with the original design. In this talk, we present our work in this field, Smart ID Network (SIN) architecture, which will further free the Internet from the three bindings. Moreover, we will also discuss the similarity and difference between SDN and SIN. We believe our work will shed light on the design of the next generation Internet.



Dr Hongke Zhang is a full Professor of Beijing Jiaotong University (BJTU), China. He received the M.S. and Ph.D. degrees from University of Electronic Science and Technology of China (UESTC), Chengdu, China, in 1988 and 1992, respectively. He is the director of the National Engineering Laboratory for Next Generation Internet Interconnection Devices, which possesses 20 full time staff, 70 PhD students, and 100 Master students by research.

Professor Zhang is the leading researcher in the areas of computer network and communication technologies in China. He has applied over 70 patents and more than 40 patents have been granted. He has also submitted dozens of international drafts to the IETF and the IEEE. He has published more than 100 research papers in top international journals and top conferences, such as IEEE Network, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Vehicular Technology, Science China, Chinese Science Bulletin, IEEE INFOCOM, IEEE GLOBECOM, and IEEE ICC. He has more than 10 monographs. He has led numerous national top level research projects funded by Chinese government, including the 973 projects (national fundamental research), the 863 projects, NSFC and so on. He has achieved numerous fruitful results, including 1) Identifier-based Universal Network (IUN), a future Internet architecture, which obtained the National Award for Technological Invention in 2014; 2) the first IPv6 router in China, which was industrialized in 2000; 3) IPv6 wireless/mobile router, which received the first-class award of Science and Technology in Beijing in 2005; 4) IPv6 Micro Sensor Routers, which obtained the STAA in 2005.

Hongke Zhang has served as the chairman of the IEEE 1888.2 Standard Working Group, chair of the first International Conference on Future Information Network (ICFIN), editor of many journals and TPC member of many international conferences. He is a member of the expert committee of the National Natural Science Foundation of China, a committee member of Chinese Institute of Electronics, and a committee member of China Institute of Communications. He is also the chief scientist of the 973 project.