



南方科技大学  
SOUTHERN UNIVERSITY OF SCIENCE AND TECHNOLOGY

# Advanced Computer Networks and Big Data

Professor Xuetao Wei

[weixt@sustech.edu.cn](mailto:weixt@sustech.edu.cn)



# Topics (subject to change)

- Introduction of computer network and the Internet
- Internet Fundamentals
- Advanced routing
- Advanced Transport Protocols
- Performance Issues
- Packet Processing: Algorithms and architectures
- Software defined networking
- Multimedia
- Blockchain
- Metaverse



# Reading List

- S H Yang, - WSN Principle, Design and Applications
- P. Nicopolitidis, M.S. Obaidat, G.I. Papadimitriou, and A.S. Pomportsis, Wireless networks, Wiley
- J. Kurose, K. Ross, Computer networking (计算机网络): a top-down approach featuring the Internet(自顶向下方法) (第6版) , Pearson Addison Wesley机械工业出版社
- 谢希仁, 计算机网络 (第7版) , 中信工业出版社
- <http://enterprise.huwei.com>
- Paul C. Zikopoulos, et al. Harness the Power of Big Data -- The IBM Big Data Platform. ISBN: 978-0-07180818-7, McGraw-Hill, 2013, 281 pages
- Mayer-Schonberger V, Cukier K (2013) Big Data, A revolution that will transform How we live, work and think, John Murray

# Learning methods

- Face-to-face lectures
- Lab sessions  
Teaching assistant Mr Yulong Chen
- Self-learning of assigned papers and materials
- Class discussion

# Assessment

- Exams (30%: quizzes + final exam) + Attendance (10%) + Assignments(60%, 2-3)