Information and Coding Theory

Schoolof Electronic Information and Electrical Engineering

___ • About the Lab • ___

The lab has a group of 4-5 Ph.D. students and 6-8 Master students in CS Department, SJTU. The research fields include Communication Coding Theory, Computer and Information Security, Storage, etc. In recent years, the members completed about 15 projects including four National Natural Science Foundations of China, National Basic Research Programs of China, Innovation Program of Shanghai Municipal Education Commission, German Research Foundations DFG, etc. The members published about 80 papers in the top journals including IEEE Trans. on IT, Communications, and Computers, etc. In recent years, the students were awarded many best papers in International Conferences.

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Yuan Luo received his M.S. and Ph.D. degrees in Probability and Statistics from Nankai University, China, in 1996 and 1999respectively. He was a post-doctor in Germany and Chinese Academic Sciences. Since June 2003, he has been with the CS Department, SJTU. He held his position as a Full Professor since 2006, and also the Vice Dean of the department since 2013. His interests include Information Theory, Coding Theory and Computer Security. Teaching Assignment: Discrete Mathematics, Information and Coding Theory.

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- **Communication Coding Theory**

  Innovation Program of Shanghai Municipal Education Commission under Grant 14ZZ017: Hamming weight, generalized Hamming weight and the trellis structures of LDPC codes, 2014.1-2016.12.

- **Information Theory**

  National Natural Science Foundation of China under Grant 61271222: The effects of channel state information and feedback on the channel capacity and secrecy capacity of some broadcast channels, 2013.1-2016.12

- **Storage**

  National Natural Science Foundation of China under Grant61571293: Relative Generalized Hamming Weight on Distributed Storage Recovery and Security, 2016-2019.

- **System Monitor Control**

  The Square Kilometer Array (SKA)Radio Telescope Project: On Local Monitor Control which includes LMC Detection on Operating System, LMC Detection and Recovery on Storage System, LMC Detection on Connections, Network Behavior Detection and Warning. (Long Period)

- **Computer Security**

  Detect Kernel-level Rookits on top of Xen virtual machine monitor (VMM).National Basic Research Program of China on Theory of Side Channel Attack and Related Defense Method on Cryptographic System, 2013-2017.

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Theoretical Discussion and Realization: working 8 hours per day (Monday To Friday) in the Lab except some particular arrangement.

・Eligibility・

- In principle, we recruit junior and senior students.
- Hold at least a 2.5 GPA on a 4.0 scale
- Students of non-English speaking countries must provide English language proficiency certificate, IELTS no less than 6.0, and TOEFL no less than 90 points. If you are in the college for English teaching programs, please provide relevant certificates.
- Have at least one prior research experience

・Additional Financial Support・

N/A

・Contact・

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