

CHENGLIN LI

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EDUCATION

Shanghai Jiao Tong University (SJTU) 09/2009 - Present

Ph. D. candidate in Electronic Engineering

Advisors: Prof. Shipeng Li (Microsoft Research Asia) and Prof. Hongkai Xiong
GPA: 3.91/4.3

Shanghai Jiao Tong University (SJTU) 09/2007 - 06/2009

M. S. in Electronic Engineering

Thesis: Optimization based control problem of networked video transmission
Advisors: Prof. Songyu Yu and Prof. Hongkai Xiong
GPA: 3.87/4.3

Shanghai Jiao Tong University (SJTU) 09/2003 - 07/2007

B. S. in Electronic Engineering

GPA: 3.80/4.3 Rank: 8/820

University of California, Los Angeles (UCLA) 08/2006 - 09/2006

Summer School: English as a Second Language

RESEARCH INTEREST

The application of distributed robust optimization in wired and wireless video transmission
Compressive sensing based networked video transmission
Network oriented image/video processing and communication
Network based optimization for various video sources

RESEARCH EXPERIENCE

Research Assistant 01/2007 - Present

Image, Video, and Multimedia Communications (IVM) Laboratory
Department of Electronic Engineering, Shanghai Jiao Tong University

- Took charge of the State Key Program of National Natural Science Foundation of China (Grant No. 60632040): Fundamental theory and experiment platform of adaptive networked video transmission.
- Optimal trading off between network lifetime and video quality for distributed video sources in wireless visual sensor networks: Formulated the network scenario and corresponding optimization problem, proposed a fully distributed algorithm, and evaluated the proposed algorithm with extensive numerical experiments in C++ code.
- Multi-rate multicasting for scalable video coding stream over hybrid wired/wireless networks: Formulated the network scenario and corresponding optimization problem, proposed a fully distributed algorithm, and evaluated the proposed algorithm with extensive numerical experiments in C++ code and simulation results implemented by NS-2.
- The survey of network coding and different channel codes (e.g. Reed-Solomon code, LDPC code, Fountain code): Studied the theory of network coding and different kinds of channel codes, and practically implemented each code.

Undergraduate Researcher 10/2005 - 06/2006

Department of Electronic Engineering, Shanghai Jiao Tong University

- Designed and implemented the distance measurement circuit with super sonic (based on the AT89S52 single-chip system).
- Reliability research on client and sever communication system.
- Designed and implemented frequency modulation receivers and transmitters.

TECHNICAL SKILLS

Outstanding mathematical analyzing and modeling ability
 Strong modeling and programming skills in C, C++, and MATLAB
 Effective technical writing in English and fluent oral English for academic communication

PUBLICATIONS

- [1] **Chenglin Li**, Hongkai Xiong, Junni Zou, and Zhihai He, “Joint Source and Flow Optimization for Scalable Video Multi-rate Multicast over Hybrid Wired/Wireless Coded Networks”, *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 21, no. 5, pp. 550-564, May 2011.
- [2] Junni Zou, Hongkai Xiong, **Chenglin Li**, Li Song, Zhihai He, and Tsuhan Chen, “Prioritized Flow Optimization with Multi-Path and Network Coding Based Routing for Scalable Multirate Multicasting”, *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 21, no. 3, pp. 259-273, March 2011.
- [3] Junni Zou, Hongkai Xiong, **Chenglin Li**, Ruifeng Zhang, and Zhihai He, “Lifetime and Distortion Optimization with Joint Source/Channel Rate Adaptation and Network Coding Based Error-Control in Wireless Video Sensor Networks”, *IEEE Transactions on Vehicular Technology*, vol. 60, no. 3, pp. 1182-1194, March 2011.
- [4] **Chenglin Li**, Junni Zou, Hongkai Xiong, and Chang Wen Chen, “Joint Coding/Routing Optimization for Distributed Video Sources in Wireless Visual Sensor Networks”, *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 21, no. 2, pp. 141-155, February 2011.
- [5] **Chenglin Li**, Hongkai Xiong, Junni Zou, and Tsuhan Chen, “A Unified QoS Optimization for Scalable Video Multirate Multicast over Hybrid Coded Network”, in *Proc. of IEEE International Conference on Communications (ICC) 2010*, May 2010.
- [6] **Chenglin Li**, Junni Zou, Hongkai Xiong, and Yongsheng Zhang, “Joint Coding/Routing Optimization for Correlated Sources in Wireless Visual Sensor Networks”, in *Proc. of IEEE Global Communications Conference (GLOBECOM) 2009*, December 2009.

HONORS AND AWARDS

RIM (BlackBerry) Research Scholarship	Fall 2010
Tung Orient Overseas Container Line (OOCL) Scholarship	Fall 2009
Second Class, Graduate Student Fellowship of SJTU	Fall 2007 - Spring 2009
Excellent Graduate Award of Shanghai City	Summer 2007
First Class, Excellent Academic Scholarship of SJTU (top 1%)	Fall 2005 - Spring 2006
First Class, Excellent Academic Scholarship of SJTU (top 1%)	Fall 2004 - Spring 2005
Dean’s List of Distinguished Students	Fall 2003 - Spring 2004

EXTRACURRICULAR ACTIVITIES

Court Services Director	2010 Shanghai Rolex Masters 1000 Qizhong Tennis Center, Shanghai	05/10/2010 - 17/10/2010
Court Services Supervisor	2009 Shanghai ATP Masters 1000 Qizhong Tennis Center, Shanghai	07/10/2009 - 17/10/2009
Court Services Volunteer	2008 Tennis Masters Cup Qizhong Tennis Center, Shanghai	08/11/2008 - 16/11/2008