

Haitao Lyu

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RESEARCH INTERESTS

Research:

- Multiple Objects Detection in Thermal Images and LiDAR Point Clouds
- Video Surveillance and multimedia data processing
- Performance Evaluation of Physical Protection System
- Big Data Retrieve

Application Fields: Security Engineering, Electronic Data Processing, Management Information System, Decision Support System, Artificial Intelligence.

EDUCATION

Wuhan University

Sep.2008-Aug.2014

Doctor's Degree in Performance Evaluation of Physical Protection System, Video Surveillance and multimedia data processing

PhD Dissertation: Research on Key Technologies of Effectiveness Evaluation for Security System, supervised by Professor Ruimin Hu, School of Computer

Huazhong University of Science & Technology

Sep. 2003-Jun. 2006

Master's Degree in Computer Science, Distributed System, Software Engineering

Thesis: Design and Implementation of Teaching Resources Database Management System Based on Asp.Net, supervised by Professors Yongying Wu, School of Computer Science & Technology

University of Information Science & Technology

Sep. 1998-Jul.2002

Majored in Computer Science & Application, School of Computer Science & Technology

Highlighted Courses: Digital Logic Circuit, Discrete Mathematics, Operation Systems, Computer Organization, Program Design in C & C++, Principle of Database, Multimedia Technology, Compiling Technique, Object Oriental Programming Technique, Computer Network, Microcomputer Interface Technique, Software Engineering, Mathematical Analysis, Functional Analysis, Higher Algebra, Fundamentals of Probability Theory, Random Process

WORKING EXPERIENCE

Visiting Scholar at **University of Texas at Dallas**

Sep/25/2017-Sep/24/2018

➤ LiDAR Data Processing

Post doctor at **Alberta University in Canada**

June/28/2016-July/04/2017

- Data matching research: I mainly focus on how to use unsupervised machine learning models to automatically find duplicated records in a database.

Lecturer at **Jiujiang University**

2011-present

- Taught undergraduate students *Program Design in C & C++ and Object Oriented Programming Technique* (2014-2016 spring semesters)
- Taught undergraduate students *How to Use Matlab and Image Processing* (2014-2016 fall semesters)
- Undertook the design and planning for the video surveillance system of Jiujiang University

PUBLICATIONS

Journal Articles

- **Lv Haitao**, Yin Cao, Cui Zongmin. A Depth Video Coding In-Loop Median Filter Based on Joint Weighted Sparse Representation. **Wuhan University Journal of Natural Sciences** .2016, vol 21 No.4 pages 351-357. (Indexed by EI)
- **Lv Haitao**. Risk Assessment of Security Systems Based on Entropy Theory and the Neyman-Pearson Criterion. **Reliability Engineering and System Safety** .2015, vol 142 pages 68-77. (Indexed by SCI, IF=2)
- **Haitao Lv**, Ruimin Hu. (2013) “Protection Intensity Evaluation for a Security System Based on Entropy Theory”. **Entropy** 15(7): 2766-2787. (Indexed by SCI, IF=1.3)
- Ruimin Hu, **Haitao Lv**. (2013) “Risk Evaluation Model of Security and Protection Network Based on Risk Entropy and Neyman-Pearson Criterion”. *Acta Automatica Sinica*, 2014, 40(12): 2737-2746 (indexed by EI)
- Zongmin Cui, Chao Yin, **Haitao Lv**, Jing Yu, Lihua Wang “Secure Key Distribution Based on Key Derivation for Cloud”. *Journal of Computational Information Systems*. 2015, 11(15).

Conference Proceedings

Haitao Lv (2015)

- Zongmin Cui, **Haitao Lv**, Chao Yin, Guangyong Gao, Caixue Zhou. “Efficient key management for IOT owner in the cloud”. 5th IEEE International Conference on Big Data and Cloud Computing (BDCloud 2015).
- Chao Yin, **Haitao Lv**, Zongmin Cui, Tongfang Li, LiLi Rao and Zhi Wang. ICRS: An Optimized Algorithm to improve performance in distributed storage system. IHMSC 2015.
- Chao Yin, **Haitao Lv**, Zongmin Cui, Tongfang Li, Sihao Yuan and Hongbo Zhou. CCRS: An Optimized Algorithm based on CRS in distributed storage system. NCDM 2015.
- Ying Xia, **Haitao Lv**, Chao Yin, Zongmin Cui, Caixue Zhou. “Lightweight data storage based on secret sharing for cloud data”. Fourth International Workshop on Large-Scale Network Security (LSNS-2015).
- Chao Yin, Jianzong Wang, **Haitao Lv**, Zongmin Cui, Lianglun Cheng, Qin

Zhan and Tongfang Li. OptRS: An Optimized Algorithm Based on CRS Codes in Big Data Storage Systems. ICA3PP 2015.

Haitao Lv Ruimin Hu (2014)

- Risk Assessment and Vulnerable Path in Security Networks Based on Neyman-Pearson Criterion and Entropy. IPASAM 12(Held at Hawaii US)
- Vulnerability Evaluation of Security Network Based on Neyman-Pearson Criterion. CESCE2014(Held at London UK)
- Vulnerability Assessment of Security Systems Based on Risk Entropy and Neyman-Person Criterion. ICMEE2014(Held at Beijing China)
- vulnerability evaluation of security network based on Protection Model of Neyman-Pearson Criterion. ICCST2014 (Held at Kunming China)

Haitao Lv Ruimin Hu (2013)

- Risk Assessment of Security Systems Based on Entropy Theory and Neyman-Pearson Criterion. CSA 2013 (Held at Wuhan China)

Haitao Lv Ruimin Hu (2011)

- Investment Decision Model of Crime Prevention System Based on Expected Monetary Values of the Economic Loss Caused by risks. ICCRD 2011 (Held at Shanghai China)

Yixue Wang, Haitao Lv (2011)

- Efficient metadata management in Cloud Computing. ICCSN 2011

Tao Lu, Haitao Lv (2011)

- E-government framework design based on grid technology. ICICIS 2011

Xi Guo, Haitao Lv (2010)

- Quantitative evaluation of crime prevention system in the museum. ICIME 2010
- The comprehensive assessment method for community risk based on AHP and neural network. NSWCTC 2010

Xi Guo, Haitao Lv (2009)

- The architecture and application of university emergency information system. ICIECS 2009

Research Projects

- *Research on Error-Correcting Code Technology for Saving Bandwidth for Big Data Storage*, funded by National Nature Science Foundation of China (No. 61662038)
- *Research on Technology of Social Security System Effectiveness Evaluation Based on Risk Entropy*, funded by National Nature Science Foundation of China (No. 61170023)
- *Research on Basic Theory and Key Technology of 3d Audio Encoding and Decoding*, funded by National Nature Science Foundation of China (No. 61231015)
- *Research on Smart City Big Data Processing and Service Based on Clouding Computer*, funded by The major Science and Technology Innovation Plan of Hubei Province (No. 2013AAA020)
- *Research on the Development and Industrialization of Wireless Intelligent Vehicle Service System*, funded by Guangdong-Hongkong Key Domain Breakthrough Project

of China (No. 2012A090200007)

- *Research on the Key Technology of Pedestrian Recognition for Video Detection*, funded by National Nature Science Foundation of China (No. 61303114)

➤ **SKILLS AND CERTIFICATIONS**

Foreign Language Proficiency

- English (1st foreign language), College English Test Band 6
Served as a part-time translator and interpreter, fluent in the special fields listed above
- French (2nd foreign language), verbally conversant

Software Skills

- Adept at writing with Microsoft Office Word and Latex
- Adroit at programing with C, C++ , python, Scala, R and Java

PERSONAL QUALITIES

Highly motivated, enthusiastic, focused, innovative, polite and approachable, dedicated, ready for teamwork.