Bob Zhao
Curriculum Vitae

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MASTER RESEARCH

"Research on Network Traffic Model with Multifractal Scaling Property"

My research applied multifractal theory to explain and model the scaling property of the Internet traffic. Comparing to self-similar traffic models, the proposed multifractal traffic model is more fined in describing the complicate scaling property of the Internet traffic. Modeling the aggregated multifractal network traffic as the superposition of multifractal processes, we can extract characteristic parameters from multifractal spectrum of the observing traffic and regenerate synthetic traffic with the same characteristics.Simulations and comparisions validated the proposed approach.

WORK EXPERIENCE

CURRENT, FROM JUL 2011 (FT)

Anhui University
Assistant Professor

In the Department of Communication Engineering, I have taught several professional undergraduate courses and graduate courses in the areas of computer science and information technology. My research intersets focus on network and communication theory, algorithms, protocols and their applications.

DEC 2018 – NOV 2021 (PT)

Itourtranslator Co.Ltd
Senior Software Engineer

I'm in charge of the architecture of the backend software system aiming to address language barriers. Based microservice framework, we have managed to schedule multiple speech translating engine resources concurrently and achieve reliable, flexble and real-time speech translation. An Instant Messaging System based on MQTT is designed to support millions of connections concurrently.

JUL 2009 – JUN 2011 (FT)

ZTE Co.Ltd
Software Engineer

I was tasked with developing and maintaining the calling module in media gateway of NGN. Work involved software design, coding and test according to new requirements, supporting and dealing with on-site problems as well as research on the next generation network.

REFERENCES

Dr. Yanjun Hu

POSITION	Professor
EMPLOYER	Department of Communication Engineering *Anhui University*
EMAIL	yanjunhu@ahu.edu.cn
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EDUCATION

2007 – 2009	**Master of Engineering** EXCELLENT GRADUATE SCHOLARSHIP Communication and Information Systems *Huazhong University of Science and Technology*
2003 – 2007	**Bachelor of Engineering** EXCELLENT GRADUATE SCHOLARSHIP Commnication Engineering *Huazhong University of Science and Technology*

PROJECTS

Ongoing

Design of a Health Surveillance and Analysis Software System Based on Microservices
This project is supported by *Anhui Wuyudata Technology Co.Ltd*. Based on microservice frameworks and video-based health indicator (heart rate, blood pressure etc.) detection algorithms, we are trying to build a non-contact health surveillance and analysis system and integrate a variety of technologies of multimedia, big data and machine learning to provide more accurate and comfortable health service.

Completed

Research on Sensing-oriented Routing Protocols in Wireless Sensor Networks
This project is supported by *Youth Foundation of Anhui University* 2011–2013. In this project, we invesigated non-IP addressing schemes and routing algorithms in large-scale wireless sensor networks in order to overcome the difficulties such as data retrieval, node addressing problems when applying the IP protocol in WSN. We proposed a patent *A method in the data retrieval system based on wireless sensor networks*ZL201310033532.0.

Participated

Design of a Field Inspection Management System in Copper Smelting Based on Industrial Internet of Things and its Application
Supported by *Anhui Jinlong Copper Co.Ltd* 2017 – 2019.
Design of a On-line Industrial Combustion Process Surveillance and Management System Based on Wireless Sensor Networks
Supported by *National Special Fund for the Development of IoT of China* 2016 – 2017.

TEACHING

Undergraduate Course

Principles and Application of Microcomputer and Microcontroller
Discrete Mathematics
Database Systems

Dr. Liping Li

POSITION Associate Professor
EMPLOYER Department of Communication Engineering
Anhui University

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Graduate Course

Simulation of Commnuication Networks
Digital Communication Theory

AWARDS

2020 **Science and Technology Progress Award, 2rd class**
Anhui Province, China

2018 **Junior Faculty Teaching Award**
Anhui University

2015 **Faculty of the Year**
Anhui University

2009 **Best MA Thesis Award**
Hubei Province, China

2007 **Best BA Thesis Award**
Huazhong University of Science and Technology

SKILLS

EXPERT Java, C++, C, Python, JavaScript

INTERESTED Mathematics, Algorithms

PUBLICATIONS

Patents

2018. An Interaction method of Field Inspection Data and its Data Format. *ZL201510418899.0*.
2016. A method in the data retrieval system based on wireless sensor networks. *ZL201310033532.0*.

Standards

Information technology—General architecture for industrial equipment inspection management system based on sensing device. *GB/T 37693-2019*.
Information technology—Sensor networks—Part 303: Communication and information exchange: Network layer specification for wireless sensor networks based on IP protocol. *GB/T 30269.303-2018*.