

THE CENTER FOR ADVANCED COMPUTER STUDIES

at

the University of Louisiana at Lafayette

Lafayette, Louisiana

Proudly announces an **ACM Distinguished Lecture**

Professor Zhu Han

Professor

ECE Department and CS Department, University of Houston

will give a presentation entitled

Cryptoeconomics: Economic Mechanisms behind Blockchains

Abstract: Due to its salient features including decentralization, anonymity, security, trust, and auditability, blockchain has attracted tremendous attention from both academia and industry. The advent of blockchain networks and their applications in various domains, including computer networks, data sciences, and Fin-Tech, create a new field of study for academia and industry: cryptoeconomics. It can extend the analytical framework based on the economic networking perspective to modeling, designing, and analyzing the participant interactions in any ecosystem raised from or built upon blockchain networks. Therefore, this tutorial first analyzes the participants' behaviors from the economic perspective and presents how the rational/irrational behaviors affect the performance and security of a distributed system. Then, from the engineering perspective, this tutorial shows a series of economic mechanisms and case studies, illustrating that a well-functioning, scalable cryptoeconomics network is able to serve as an efficient platform for decision arbitration and allocation of the resources ranging from physical utilities (e.g., hardware) to financial assets. As a result, cryptoeconomics can shed light on the better characterization of blockchain-assisted systems.

DATE: Tuesday, June 14, 2022

TIME: 10:00 A.M – 11:00 am (Central time)

LOCATION: Via Zoom

Biography: Zhu Han received a B.S. degree in electronic engineering from Tsinghua University, in 1997, and an M.S. and Ph.D. degrees in electrical engineering from the University of Maryland, College Park, in 1999 and 2003, respectively. From 2000 to 2002, he was an R&D Engineer at JDSU, Germantown, Maryland. From 2003 to 2006, he was a Research Associate at the University of Maryland. From 2006 to 2008, he was an assistant professor at Boise State University, Idaho. Currently, he is a John and Rebecca Moores Professor in the Electrical and Computer Engineering Department as well as the Computer Science Department at the University of Houston, Texas. His research interests include security, wireless resource allocation and management, wireless communication and networking, game theory, and wireless multimedia. Dr. Han is an NSF CAREER award recipient of 2010. Dr. Han has several IEEE conference best paper awards, and winner of 2011 IEEE Fred W. Ellersick Prize, 2015 EURASIP Best Paper Award for the Journal on Advances in Signal Processing and 2016 IEEE Leonard G. Abraham Prize in the field of Communication Systems (Best Paper Award for IEEE Journal on Selected Areas on Communications). Dr. Han is the winner 2021 IEEE Kiyo Tomiyasu Award. He has been an IEEE fellow since 2014, AAAS fellow since 2020, IEEE Distinguished Lecturer from 2015 to 2018 and ACM Distinguished Speaker from 2022-2025. Dr. Han is a 1% highly cited researcher according to Web of Science since 2017.



Zoom Meeting: Meeting ID: 978 4429 4941, Passcode: 032110

Link: <https://ullafayette.zoom.us/j/97844294941?pwd=SVYrQjFLbXN6ZHBHM1kxMk5PUm03QT09>