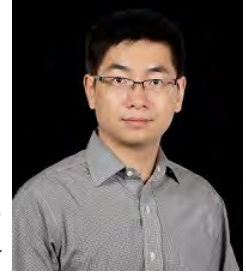


## Secure and Efficient Encrypted Image Search with Access Control

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### **Abstract**

Image search has been widely used in many applications for the rich content that images contain. As a viable solution, outsourcing image search services to cloud appears to be an economic choice especially for small organizations. However, privacy shall be well protected for image outsourcing because many images contain sensitive and/or private information. To this end, several attempts have been made towards secure image search over encrypted dataset. Promising as they are, these attempts are mostly limited by either search accuracy or search efficiency. In this talk, we introduce a new encrypted image search scheme, namely SEISA. SEISA is featured by its lightweights and security. Even compared with state-of-the-art search techniques over unprotected images, SEISA is only about 9% slower and loses about 3% of search accuracy. It also efficiently supports access control of the search capabilities by employing a novel polynomial based design, which enables data owners to define who can search a specific image.

### ***About the Speaker***

Dr. Shucheng Yu is an assistant professor at the Computer Science department of the University of Arkansas at Little Rock. He received his PhD in Electrical and Computer Engineering from Worcester Polytechnic Institute in 2010. His research interest includes cloud computing & big data security, wireless networks & security, and security & privacy in smart systems. He has published over 50 high-impact research articles in premier journals and conferences which have received near 4000 citations according to Google Scholar. Dr. Yu's research has been funded by several extramural agencies such as the National Science Foundation. He serves as the editor or guest editor for several international journals, and has been a frequent member of the organizing committee or technique committee for tens of international conferences. Dr. Yu is the awardee of the 2016 faculty excellence in research award in the EIT college of UALR. He is a member of IEEE, IEEE ComSoc and ACM.

***Reception in Dunn Hall 336 - 1:30pm***