



## Colloquium



*Date, time & venue:* Monday, April 18th, 2016,  
11:00-12:15 in BB010

*Title:* **Photo Forensics: There is more to a picture than meets the eye**

*Speaker:* **Prof. Nasir Memon**

CSE Department, School of Engineering, NYU

(<http://engineering.nyu.edu/people/nasir-memon>)

**Abstract:** Given an image or a video clip can you tell which camera it was taken from? Can you tell if it was manipulated? Given a camera or even a picture, can you find from the Internet all other pictures taken from the same camera? Forensics professionals all over the world are increasingly encountering such questions. Given the ease by which digital images can be created, altered, and manipulated with no obvious traces, digital image forensics has emerged as a research field with important implications for ensuring digital image credibility. This talk will provide an overview of recent developments in the field, focusing on three problems and list challenges and problems that still need to be addressed. First, collecting image evidence and reconstructing them from fragments, with or without missing pieces. This involves sophisticated file carving technology. Second, attributing the image to a source, be it a camera, a scanner, or a graphically generated picture. The process entails associating the image with a class of sources with common characteristics (device model) or matching the image to an individual source device, for example a specific camera. Third, attesting to the integrity of image data. This involves image forgery detection to determine whether an image has undergone modification or processing after being initially captured.

**Speaker's brief bio:** Prof. Nasir Memon chairs the Department of Computer Science and Engineering at NYU Tandon and holds affiliate appointments at the NYU Courant Institute for Mathematical Sciences and NYU Abu Dhabi. He

founded one of the first cyber security focussed laboratory in 2001 and one of the first graduate degree programs in cyber security,in 2009, and a student-led cyber security event CSAW in 2003 that has become the largest in the world. Today, the NYU Tandon cyber security program is one of only a handful in the country to have earned all three cyber security “Center of Excellence” designations from the government. Memon’s research interests include digital forensics, biometrics, data compression, network security and security and human behavior. He has made significant contributions to the JPEG standrads and created image carving technology that has been used by law enforcement agencies around the world. He has been on the editorial boards of several journals and was the editor-in-chief of the IEEE Transactions on Information Security and Forensics. He is an IEEE Fellow and an SPIE Fellow for his contributions to image compression and multimedia security and forensics. Memon received a Ph.D. in computer science from the University of Nebraska.