



THE CHINESE UNIVERSITY OF HONG KONG
Institute of Network Coding
and
Department of Information Engineering
Seminar



**On Theory and (Little) Practice of Coding Techniques for
Distributed Networked Storage Systems**

by

Prof. Frederique Oggier
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Date : 4 January 2012 (Wednesday)
Time : 3:30 - 4:30 pm
Venue : Room 833, Ho Sin Hang Engineering Building
The Chinese University of Hong Kong

Abstract

Global data storage need keeps on increasing, requiring efficient and reliable storage solutions which have to scale several orders of magnitude more than a decade back. In this talk, we will discuss a line of works that addresses the problem by designing new codes tailor made to satisfy the requirements of distributed networked storage systems, focusing on storage overhead and repair bandwidth. We will introduce self-repairing codes, a family of codes that aims at reducing the number of live nodes contacted during repair, and present different simulation results, to assess how theoretically good codes perform in more realistic environments.

This is joint work with A. Datta and L. Parnes Juarez.

Biography

Frederique Oggier obtained a Ph.D. thesis in Mathematics/Communication Systems from EPFL in 2005. She was a postdoctoral visitor at the California Institute of Technology (CalTech) from 2005 till 2007, and at the Research Center for Information Security (RCIS) in Tokyo, Japan, from 2007 to 2008. She is currently an Assistant Professor at the School of Physical and Mathematical Sciences, Nanyang Technological University (NTU), Singapore. She is a recipient of the Singapore NRF Fellowship.

Her main research interests are in applied algebra to coding problems arising in wireless communications, distributed networked storage as well as information theoretic security.

****ALL ARE WELCOME ****