Jungyeon Yoon

School of Computer Science
Georgia Institute of Technology

Room E1054, Coda building
756 W Peachtree St NW, Atlanta, GA 30308

(404) 948-7843
jungyeon@gatech.edu

RESEARCH INTEREST

Operating system, distributed file system, graph processing system and flash/persistent memory

EDUCATION

Georgia Institute of Technology   01/2019 – Present
  Ph.D. in Computer Science
  Adviser: Dr. Taesoo Kim

Sogang University   03/2002 – 08/2005
  M.S. in Computer Science
  Thesis: An Area Reduced Pipelined FFT Processor Design

Sogang University   03/1999 – 02/2002
  B.S. in Computer Science

WORK EXPERIENCE

SK Telecom, Research Center, Senior Engineer   03/2015 – 12/2018
  Blockchain consensus algorithm, Blockchain Tech. Lab
  Ceph and GlusterFS, Software-defined Storage Lab

Samsung Electronics, SW Development Team, Senior Engineer   01/2012 – 02/2015
  Flash translation layer of 12G SAS SSD for enterprise servers using VNAND
  Lead 6G SAS SSD development for enterprise servers using MLC Nand
  Flash translation layer 6G SAS SSD for enterprise servers

Samsung Electronics, Flash Solution Development Team, Engineer   08/2005 – 12/2011
  Flash translation layer of 3G SATA SSD
  Cache layer of 1.5G SATA SSD
  Samsung paper Awards, gold prize: "Multimedia workload analysis for SSD"
  Nand flash modeling on the virtual platform

PUBLICATIONS

1. **Finding Semantic Bugs in File Systems with an Extensible Fuzzing Framework**
    Seulbae Kim, Meng Xu, Sanidhya Kashyap, **Jungyeon Yoon**, Wen Xu, Taesoo Kim
    In Proceedings of the 27th ACM Symposium on Operating Systems Principles (SOSP), 2019

2. **Exploring Fault-Tolerant Erasure Codes for Scalable All-Flash Array Clusters**

Sungjoon Koh, Jie Xhang, Miryeong Kwon, **Jungyeon Yoon**, David Donofrio, Nam Sung Kim, Myoungsoo Jung

In IEEE Transactions on Parallel and Distributed Systems (30.6, June 1, 2019): 1312-1330

3. **Design of Global Data Deduplication for a Scale-Out Distributed Storage System**
   Myoungwon Oh, Sejin Park, **Jungyeon Yoon**, Sangjae Kim, Kang-won Lee, Sage Weil, Heon Y. Yem, Myoungsoo Jung
   In IEEE Internation Conference on distributed Computing Systems (ICDCS), 2018

4. **Understanding System Characteristics of Online Erasure Coding on Scalable, Distributed and Large-Scale SSD Array System**
   Sungjoon Koh, Jie Xhang, Miryeong Kwon, **Jungyeon Yoon**, David Donofrio, Nam Sung Kim, Myoungsoo Jung
   In IEEE Internation symposium on Workload Characterization (IISWC), 2017

5. **Performance Optimization for All Flash Scale-out Storage**
   Myoungwon Oh, Jungwan Eom, **Jungyeon Yoon**, Jae Yeun Yun, Seungmin Kim
   In IEEE International Conference of Cluster Computing (Cluster), 2016

PATENTS

1. **Method of mapping address in storage device, method of reading data from storage devices and method of writing data into storage devices**
   Hyun-Seob Lee, **Jung-Yeon YOON**, US20150227313A1

2. **Memory system monitoring data integrity and related method of operation**
   Kwangseok IM, **Jung-Yeon YOON**, Han-Ju Lee, Ha-Neul Jeong, US20150135042A1

3. **Solid state drive and method of controlling an error thereof**
   Seungho Lim, **Jung-Yeon YOON**, US20110191649A1

4. **Non-volatile memory controller processing new request before completing current operation, system including same, and method**
   Change-Hee LEE, Jung Been IM, **Jung-Yeon YOON**, Young-goo Ko, Dong Hyun SONG, US20100268871A1

5. **Non-volatile semiconductor memory controller for processing one request first before completing another request, Memory system having the same and Method there-of**
   Jung Been IM, Change-Hee LEE, Young-goo Ko, **Jung-Yeon YOON**, Dong Hyun SONG, KR1020090032882