

Richard P. Spillane

WORK EXPERIENCE

AUGUST 2014 – JUNE 2015

Senior Software Engineer at Defend 7
Security Service Backend Design

Co-designed and implemented several prototype security systems that could monitor activity on machines in a large company network. Designs for technologies were informed by customer conversations and feedback for a rapidly evolving product.

JAN 2012 – AUGUST 2014

Software Engineer at Apple
Filesystems and Kernel Engineering and Design

Co-designed with another engineer and implemented a complete functioning prototype storage system, now being further developed for release. Benchmarked and analyzed the Fusion Drive system for Core Storage. Designed, implemented, and patented a secure encrypting storage system specific to SSDs for Core Storage.

SPRING 2005 – FEBRUARY 2012

Research Assistant at FILE SYSTEMS AND STORAGE
LAB (FSL), Stony Brook University
Ph.D Candidate and Researcher

Erez Zadok was my advisor. I organized other students and professors, sometimes from other universities, into research groups for collaboration resulting in paper publications and a grant. I researched new data structures for file systems.

SUMMER 2010

Summer Intern at IBM T. J. WATSON RESEARCH,
Yorktown
Microchip Design and Analysis

John Tracey was my supervisor. I developed a mathematic benchmark in microcode for a custom SIMD architecture supercomputer for installation at a government client site. Work was completed months ahead of schedule and the benchmark was one of the first two programs able to test on hardware with a majority of CPUs online.

SUMMER 2008

Summer Intern at RIVERBED, San Francisco
Physical Natural Gas Trading

Nitin Parab was my supervisor. Myself and another intern analyzed potential performance issues for a deduplication prototype.

JANUARY 2004 – JANUARY 2006

INTRIGMA, INC., Stony Brook
Website Technologies and Business Development

Intrigma is an ER physician scheduling company I helped found as a student and later consulted with.

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📄 <http://www.fsl.cs.sunysb.edu/~rick>

EDUCATION

2006 – 2012 **Doctor of Philosophy**
COMPUTER SCIENCE
The University of Stony Brook

2002 – 2006 **Bachelor of Science**
DOUBLE MAJOR IN COMPUTER SCIENCE
AND MATHEMATICS, MAGNA CUM LAUDE
The University of Stony Brook

AWARDS

\$40,000 **Grant Proposal for LSM-Tree
Filesystem Research**
NetAPP

\$21,282 **Ph.D Stipend and Tuition Assistance**
Research Foundation of New York

\$12,000 **Scholarships**
Symbol Tech., URECA Stony Brook, Conferences

COMPUTER SKILLS

Languages C, C++, scripting,
Go, Java
Other Skills Kernels (Linux, XNU)
Database Design, File Systems,
SIMD and microcode programming

SELECTED PUBLICATIONS

FAST 2013 Building workload-independent storage
with VT-trees
VLDB 2012 Don't Thrash How to Cache your Hash
in Flash
SOCC 2011 An Efficient Multi-Tier Tablet Server
Storage Architecture
MSST 2010 Exporting Kernel Page Caching for Efficient
User-Level I/O
FAST 2009 Enabling Transactional File Access via
Lightweight Kernel Extensions
TAPP 2009 Story Book: An Efficient Extensible
Provenance Framework
TOS 2007 Extending ACID semantics to the file system