

## SHAYA POTTER

10910 Oakwood St. Silver Spring, MD 20901

(646) 408-8460; [spotter@cs.columbia.edu](mailto:spotter@cs.columbia.edu); <http://yucs.org/~spotter/>

### OBJECTIVE

To utilize and improve my skills as a systems engineer, software designer and researcher

### WORK EXPERIENCE

|  |                                    |
|--|------------------------------------|
| <b>Network Computing Lab, Columbia University, New York, NY</b><br><i>Lab member – Graduate Research Assistant (Masters &amp; PhD student)</i><br>Engaged in a variety of research, primarily involving operating systems and multimedia streaming. <ul style="list-style-type: none"><li>• ZAP – Enables processes to migrated from one machine to another.</li><li>• *Pod – Leverages ZAP to support mobile application specific environments (desktop, web browser...)</li><li>• AutoPod – Leverages Zap to enable autonomic maintenance of computer systems</li><li>• PeaPod – Extends Zap to support secure isolation and migration of cooperating processes</li><li>• Strata – A novel administrative framework that changes how one manages large numbers of machines.</li><li>• Apiary – Leverages Strata to create a secure desktop composed of isolated applications</li><li>• ISE-T – Applies Two Person Control model to system administration</li></ul> | 2001-Present                       |
| <b>IBM Research, Hawthorne, NY</b><br><i>Summer Intern</i><br>Worked on SoulPad, IBM's research project that leverages virtual machines to enable a user to carry one's desktop computing environment between physical machines. <ul style="list-style-type: none"><li>• Focused on ability to productize and deploy SoulPad.</li></ul>  | Summer<br>2006                     |
| <b>Microsoft, Redmond WA</b><br><i>Summer Software Development Engineer Intern</i><br>Worked on Windows Terminal Services Client, creating a cross platform core. This enables a single highly tested code base to be used across all Microsoft supported platforms (Win32, WinCE, XBox, MacOS X)  | Summer<br>2004                     |
| <b>IBM Research, Hawthorne, NY</b><br><i>Summer Intern</i> <ul style="list-style-type: none"><li>• Designed and implemented Peer to Peer overlay networking architecture</li><li>• Investigated algorithms related to peering arrangement and search propagation</li></ul>   | Summer<br>2003                     |
| <b>IBM Research, Yorktown Heights, NY</b><br><i>Summer Intern</i> <ul style="list-style-type: none"><li>• Worked on IBM's Linux WatchPad prototype</li><li>• Implemented tools to analyze the WatchPad's power usage in order to help optimize it</li><li>• Created a reduced memory footprint version of the WatchPad software</li><li>• Created a native development environment for the WatchPad, in order to allow compilation of many programs that will not cross-compile</li></ul>  | Summer<br>2001                     |
| <b>IBM Extreme Blue, Cambridge, MA</b><br><i>Summer Intern</i><br>Part of a team that designed and implemented a new benchmarking methodology that enables one to predict application performance across multiple platforms without having to port the application to all those platforms. <ul style="list-style-type: none"><li>• Built portable trace tools, micro-benchmarks and file system benchmarks to create the tools to predict application performance across the platforms.</li></ul>  | Summer<br>2000                     |
| <b>Student Organization of Yeshiva (SOY) Seforim ("Book") Sale, New York, NY</b><br><i>Software Designer and Developer.</i> <ul style="list-style-type: none"><li>• Designer and Developer of inventory and point of sale software to support this student run book sale,</li><li>• Software was able to handle the over \$1million in sales that occurred in the sales 2 week run each year.</li><li>• In charge of ensuring all IS services ran smoothly during the sale.</li></ul>  | 1999-2001                          |
| <b>Naval Research Laboratory, Information Technology Division, Washington, DC</b><br><i>Engineering Aid</i><br>Worked with the Fleet Network Security group of the Center for High Assurance Computing.<br><u>Major Projects</u> <ul style="list-style-type: none"><li>• Designed a large district wide firewall and load balancing infrastructure that US Navy deployed around all their computing resources in San Diego with plans to deploy around other large installations.</li><li>• Investigated many Network Intrusion Detection systems and other network security tools in order to</li></ul>   | 1996-2000<br><br>1999-2000<br>1998 |

determine if and how the US Navy could use them.

- Participated in software evaluation and development for the US Navy's IT-21 Initiative for the 21<sup>st</sup> Century. 1997-1998
- Continued work started as a SEAP intern and helped build the Secure Tactical Access Terminal (STAT) which was deployed on the aircraft carrier USS Theodore Roosevelt to rave reviews. 1996

**NRL & George Washington University SEAP Intern, Washington, DC** Summer  
*SEAP Intern* 1995

- Worked on porting Unix applications to MultiLevel Secure Workstations

## ACADEMIC EXPERIENCE

**School of Engineering and Applied Science, Columbia University, New York, NY** 2001-Present

*Ph.D. Student, Expected Graduation Summer, 2009*

*M.A.: October 2003*

Emphasis on research in computer systems, software migration security and multimedia streaming systems (see work experience). Strong academic standing (3.953 GPA).

**Yeshiva College, Yeshiva University, New York, NY** 1998-2001

*Graduated with honors - B.A. in Computer Science, May, 2001*

- Strong academic standing (3.7 GPA cumulative, 4.0 GPA in major)

## SKILLS, CERTIFICATIONS, AND AWARDS

### Skills:

- *Operating systems/Platforms:* Windows 2000/NT/Me/9x/3.x, DOS; UNIX (Solaris, SCO Unix, Linux, BSD, AIX, HP-UX);
- *Languages:* C, C++, Java, Tcl/Tk, Unix Shell Scripting, SQL, HTML
- *Networks:* UNIX, Windows NT/2000, LAN/WAN hardware, remote access (Microsoft, Citrix MetaFrame, VNC, etc.), wireless (IEEE 802.11b)
- *Internet services:* Apache, Sendmail, Qmail, TCP/IP services (including BIND/DNS, NAT, DHCP, firewalling)

### Awards:

- Golding Distinguished Scholar (full 4 year undergraduate scholarship) May '99
- ACM Programming Competition 5<sup>th</sup> place (NY Region) '99 & '00
- SEAP's "Most Outstanding" Intern 1995

## SELECTED PUBLICATIONS

- Ricardo Baratto, Shaya Potter, Gong Su and Jason Nieh. *Mobidesk: Mobile Virtual Desktop Computing*. In *Proceedings of the Tenth Annual ACM International Conference on Mobile Computing and Networking (Mobicom 2004)*, Philadelphia, PA. Sept 26-Oct.1 2004 (*Best Student Paper Award*)
- Shaya Potter and Jason Nieh. *WebPod: Persistent Web Browsing Sessions with Pocketable Storage Devices*. In *Proceedings of the 14<sup>th</sup> International World Wide Web Conference (WWW 2005)*, Chiba Japan. May 10-14 2005.
- Shaya Potter and Jason Nieh. *Reducing Downtime Due to System Maintenance and Upgrades*. In *Proceedings of the 19<sup>th</sup> Large Installation System Administration Conference (LISA '05)*, San Diego, CA. Dec. 4-9 2005. (*Best Student Paper Award*)
- Shaya Potter and Jason Nieh. *Breaking the Ties that Bind: Process Isolation and Migration*. In *login* Vol 30(6). pp 14-17, Dec. 2005
- Oren Laadan, Ricardo Baratto, Dan Phung, Shaya Potter, and Jason Nieh, *DejaView: A Personal Virtual Computer Recorder*. In *Proceedings of the Twenty-first ACM Symposium on Operating Systems Principles (SOSP 2007)*, Stevenson, WA, October 14-17, 2007
- Shaya Potter, Jason Nieh and Matthew Selsky, *Secure Isolation of Untrusted Legacy Applications*, Proceedings of the Twenty-first Large Installation System Administration Conference (LISA 2007), Dallas, TX, November 11-16, 2007, pp. 117-130.
- Shaya Potter and Jason Nieh. *Improving Virtual Appliances Management through Virtual Layered File Systems*. Technical Report CUCS-008-09, Department of Computer Science, Columbia University, January 2009.

## REFERENCES

References available upon request.