

Agoston Petz

Ph.D. Candidate, Software Engineering

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Education - The University of Texas at Austin

- May '12 (expected) **Ph.D.**, *Electrical And Computer Engineering*, Advisor: Christine Julien.
Dissertation Topic: Adaptive Middleware for Delay-Tolerant Networks, GPA: 3.95/4.0
- May '08 **M.S.E.**, *Electrical and Computer Engineering*, GPA 3.95/4.0.
- May '06 **B.S.**, *Electrical and Computer Engineering*, Graduated with Honors, GPA 3.80/4.0.

Knowledge and Skills

- Languages C/C++, Perl, Python, Java, MATLAB, LabVIEW
- Tools GCC, GDB, and open source development toolchain, Visual Studio, Eclipse, TI Code Composer Studio, Matlab, Mathematica, Multisim, PSpice
- Networks TCP/IP protocols, 802.11a/b/g MACs, Zigby, Ad-Hoc and Delay-Tolerant Networks, OMNeT++/OMNEST Network Simulators, TinyOS development, sensor network design and implementation
- OS Linux (app & kernel development), BSD, Windows NT-based, TinyOS
- Misc. L^AT_EX, HTML, Doxygen.

Professional Experience

- Sept. '11—Present **Wibole**, *Consultant - Wireless Networks and Middleware*, Austin, TX.
Consulting for start-up company, designing and implementing novel multihop wireless solution to improve coverage and capacity of cellular networks.
- May—Aug. '11 **Deutsche Telekom Labs**, *Graduate Research Intern*, Berlin, DE.
Designed and implemented MADServer, a context-driven middleware that provides data offloading services to dynamic web applications. Work resulted in a patent application.
- Jun.—Aug. '05 **Microsoft**, *Software Developer in Test*, Redmond, WA.
Developed a test suite on Windows Vista for several implementations of the Trusted Computing Group's software stack (TSS). Worked directly with several major TCG software vendors. Worked with Microsoft's Next Generation Security Computing Base team (NGSCB) on Trusted Platform-enabled services and applications.
- May—Aug. '04 **IBM - Linux Technology Center**, *Co-op Pre-Professional Programmer*, Austin, TX.
Developed BogoSec, a source code scanning utility with members of the Linux Technology Center's security team. Contributed to an auto-installer program for SUSE Linux Enterprise Edition.

Academic Experience

@ The University of Texas at Austin.

- May '07—Present **Graduate Research Assistant**, *Mobile and Pervasive Computing Lab*.
Designing and implementing a delay-tolerant networking stack and middleware to supporting delay-tolerant applications and services. Investigating dynamic, context-based network stack reconfiguration and stack-swapping for delay-tolerant networks.
- Sept. '09—Present **Graduate Research Assistant**, *Pharos Testbed*.
Working with mobile autonomous robots, designed and wrote mobility analysis framework and real-world-to-simulation mobility model translation tools, writing code to manage network hardware and connectivity, designing and executing experiments.
- Jan—May '11 **Teaching Assistant**, *Formal Methods in Computing*.
Graded homework for graduate-level class.

- Sept.—May '10 **Undergraduate Research Project Manager.**
Managed and advised undergraduate robotics project.
- Aug.—May '07 **Teaching Assistant, *Introduction to Electrical Engineering.***
Taught lab component of freshman-level robotics and circuit design course. Held recitation sessions. Graded papers and tests.
- Jan. '03—
May '06 **Undergraduate Researcher, *The HoneyNet Project.***
Worked with the HoneyNet Research Alliance, an international team of developers, on network monitoring tools to profile malicious hackers. Helped develop client-side honeypots to find malicious sites and browser vulnerabilities. Also worked on Sebek, a kernel-level modification to allow remote system monitoring. Test lead for the Honeywall, a boot-able linux-based network monitoring and IDS solution.

Selected Activities

- 2012 **Technical Program Committee Member, *4th ACM International Workshop on Hot Topics in Planet-Scale Measurement, (HotPlanet 2012).***
Demo Chair, *4th Annual Conference on Extreme Communications, (ExtremeCom 2012).*
- 2011 **Invited Talk: “*A Case for Context in Delay-Tolerant Networks*”, *4th DisCoTec Workshop on Context-aware Adaptation Mechanisms for Pervasive and Ubiquitous Services, (CAMPUS 2011).***
- Summer '09, '10 **MITE Engineering Summer Camp.**
Presented and demonstrated autonomous robots to pre-collegiate students during MITE summer camp.
- Summer 2006 **Texas 4000 for Cancer, *Rider and Web Committee.***
Cycled 4500 miles from Austin, TX to Anchorage, AK with a student-led and student-run charity organization to raise money for, and to promote the cause of the American Cancer Society. Planned and organized ride with 40 other university students, promoted charity events, designed and built registration website, raised money.
- 2004—2006 **Vice President, *IEEE Communications Society (ComSoc), UT Student Branch.***

Honors and Awards

Engineering Foundation Endowed Graduate Presidential Scholarship
EDGE Scholar
First Year Engineering Honors Program
Friends of Alec Engineering Scholarship 2002-2006
National Merit Commended Scholar

Patents

European Union Patent (Under Review - 11183520.3 - 1244). Delivering Content From a Server to a Client. Deutsche Telekom AG; Technische Universität Berlin.

Publications

- A. Petz, B. Walker, C-L. Fok, C. Ardi and C. Julien. “[Network Coded Routing in Delay Tolerant Networks: An Experience Report](#)”. Proceedings of the 3rd Extreme Workshop on Communication. 2011.
- B. Walker, C. Ardi, A. Petz and J. Ryu. “[Experiments on the Spatial Distribution of Network Code Diversity in Segmented DTNs](#)”. Proceedings of the ACM MobiCom workshop on Challenged Networks (CHANTS '11).

- A. Petz, T. Jun, N. Roy, C-L. Fok and C. Julien. "[Passive Network-Awareness for Dynamic Resource-Constrained Networks](#)". Proceedings of the 11th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS '11).
- A. Petz, B. Walker, C. Ardi and C. Julien. "[The Click Convergence Layer: Putting a Modular Router Under DTN2](#)". Proceedings of the 2nd Extreme Workshop on Communication. 2010. *Received Best Student Paper Award.*
- A. Petz and J. Enderle and C. Julien. "[A Framework for Evaluating DTN Mobility Models](#)". Proceedings of the 1st Workshop on Scenarios for Network Evaluation Studies. 2009.
- A. Petz and C. Julien. "[An Adaptive Architecture to Support Delay Tolerant Networking](#)". Proceedings of the 7th Workshop on Adaptive and Reflective Middleware. 2008.
- A. Petz and C. Julien. "[The MaDMAN Middleware for Delay-Tolerant Networks](#)". Poster at HotMobile '10.