Kevin Boos

Systems/Mobile Researcher

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Education

2012 — **Ph.D. Computer Engineering**, *Rice University*.
Advisor: Dr. Lin Zhong, *Rice Efficient Computing Group*

2007 – 2011 — **B.S. Computer Engineering**, *The University of Texas at Austin*.
GPA: 3.91/4.00 Minor: Mandarin Chinese

Industry Experience

2015 — **Research Intern**, *Microsoft Research*.
- Cloud-served Virtual Reality for mobile devices.
- Mentors: David Chu & Eduardo Cuervo

2014 — **Advanced Technology Intern**, *ARRIS (formerly Motorola Mobility)*.
- Display sharing synchronization framework for multi-screen distributed systems.
- Mentors: Venu Vasudevan & Jehan Wickramasuriya

2012 — **Ph.D. Research Intern**, *Nokia Research Center*.
- I/O virtualization of Linux kernel block devices.

Undergraduate Internships

2011 — **Software Developer**, *Emerson Process Management, I/O Services*.
- Designed comm. protocol to collect data from I/O devices for process control.
- Created Windows Forms app (C#) to log I/O data and generate graphical displays .

2009 — **Technical R&D Intern**, *Texas Instruments DLP*.
- Developed analog circuit to power digital micromirror devices (DMD) used in pico-projectors.
- Programmed Perl test routines, lab-tested DMD functionality using probes/parametric analyzers.

Publications

2015 — **Kevin Boos**, A. Amiri Sani, and L. Zhong. "Eliminating State Entanglement with Checkpoint-based Virtualization of Mobile OS Services." In *APSys* 2015.

2014 — A. Amiri Sani, **Kevin Boos**, M.H. Yun, and L. Zhong. "Rio: A System Solution for Sharing I/O Between Mobile Systems." In *MobiSys* 2014.

2014 — A. Amiri Sani, **Kevin Boos**, S. Qin, and L. Zhong. "I/O Paravirtualization at the Device File Boundary." In *ASPLOS* 2014.

2012 — **Kevin Boos**, C. Fok, C. Julien, M. Kim. "BRACE: An Assertion Framework for Debugging Cyber-Physical Systems." In *ICSE* 2012.

Knowledge & Skills

Languages
- C
- Java
- C++
- Shell

Environments/Platforms
- Linux kernel
- Android frameworks
- ARM architecture
- Static analysis (Clang/LLVM)

Tools
- Vim
- Eclipse
- Git/SVN
- LaTeX

Other Skills
- Intermediate competency in spoken/written Mandarin Chinese
- Concert-level pianist, over 20 years of experience

Awards

2014 — ACM MobiSys 2014 Best Paper Award.

2013 — NSF GRP Honorable Mention.

2012 — Rice University Graduate Fellowship.

2007–2011 — *Earnest Cockrell, Jr.* Engineering Scholarship.
Maintained GPA $>$ 3.5 for all undergraduate semesters.

2010 — UT Austin Asian Studies Chinese Scholarship.

Relevant Coursework

- Multicore Computing Architectures
- Complexity in Mobile Computing
- Compiler Design & Construction
- Software Measurement & Metrics
- Real-time Embedded OS Design
- Real-time Microcontroller Interfacing
- Parallel Programming
- Computer Security
- Distributed Systems
- Software Evolution
- Embedded Design & Modeling (SpecC)
- Digital Logic/FGPA Design (VHDL)

References

Advisor — **Lin Zhong, Ph.D.**, `lzhong@rice.edu`, (713) 348-4163.
Associate Professor, Rice University ECE & CS Department

Additional references available on request.