JEREMY ANDRUS

RESEARCH INTERESTS

The intersection between technology and people.
Operating systems, C, kernel development, XNU, and macOS/iOS.

EDUCATION

Ph.D. Computer Science, Columbia University, February 2015
      Advisor: *Jason Nieh*
      Dissertation Title: *Multi-Persona Mobile Computing*

M.Phil. Computer Science, Columbia University, February 2013

M.S. Computer Science, Columbia University, February 2011

B.S.E. Electrical and Computer Engineering, Calvin College, May 2003

POSITIONS

Apple, Cupertino, CA
      Kernel Engineering Manager, October 2015 - Present

Apple, Cupertino, CA
      Kernel Engineer, June 2014 - October 2015

Columbia University, New York, NY
      Graduate Student Research Assistant, August 2010 - June 2014

Gentex Corporation, Zeeland, MI
      Senior Electronics Research Engineer, June 2003 - August 2010

Solidus Design, Grand Rapids, MI
      Web Programmer, January 2002 - May 2003

Calvin College, Grand Rapids, MI
      Student Research Assistant, May 2002 - August 2002

AWARDS

Facebook Fellow 2012-2013.

Qualcomm Innovation Fellowship finalist 2012-2013.

Best Paper award at ACM SIGCSE, 2012.

Best Paper award at ACM Symposium on Operating System Principles, 2011.

Andrew P. Kosoresow Memorial Award for Outstanding Performance in TA-ing and Service at Columbia University, 2011.

PUBLICATIONS

- Jeremy Andrus, Naser AlDuaij, and Jason Nieh. Binary Compatible Graphics Support in Android for Running iOS Apps. In *Proceedings of the 18th ACM/IFIP/USENIX Middleware Conference* (Middleware), 2017.

- Vaggelis Atlidakis, Jeremy Andrus, Roxana Geambasu, Dimitris Mitropoulos, and Jason Nieh. POSIX Abstractions in Modern Operating Systems: The Old, The New, and The Missing. In *Proceedings of the Eleventh European Conference on Computer Systems* (EuroSys), 2016.

- Jeremy Andrus. Multi-Persona Mobile Computing. *Ph.D. Thesis, Columbia University*, 2015.

- Jeremy Andrus, Alexander Van't Hof, Naser AlDuaij, Christoffer Dall, Nicolas Viennot, and Jason Nieh. Cider: Native Execution of iOS Apps on Android. In *Proceedings of the 19th international conference on Architectural support for programming languages and operating systems* (ASPLOS), 2014.

- Christoffer Dall, Jeremy Andrus, Alexander Van't Hof, Oren Laadan, and Jason Nieh. The Design, Implementation, and Evaluation of Cells: A Virtual Smartphone Architecture. In *ACM Transactions on Computer Systems* (TOCS): Volume 30 Issue 3, August 2012.

- Jeremy Andrus, and Jason Nieh. Teaching Operating Systems Using Android. In *Proceedings of the 43rd ACM technical symposium on Computer Science Education* (SIGCSE), 2012.

- Jeremy Andrus, Christoffer Dall, Alexander Van't Hof, Oren Laadan, and Jason Nieh. Cells: A Virtual Mobile Smartphone Architecture. In *Proceedings of the Twenty-Third ACM Symposium on Operating Systems Principles* (SOSP), 2011.

- Jeremy Andrus, Alexander Van't Hof, Naser AlDuaij, Christoffer Dall, Nicolas Viennot, and Jason Nieh. Chameleon: Multi-Persona Binary Compatibility for Mobile Devices (TR). *Columbia University Technical Report* (cucs-011-13), April 2013.

- Jeremy Andrus, Christoffer Dall, Alexander Van't Hof, Oren Laadan, and Jason Nieh. Cells: A Virtual Mobile Smartphone Architecture (TR). *Columbia University Technical Report* (cucs-022-11), May 2011.

PATENTS

- **US Patent 10417054**
  Scheduler for AMP Architecture with Closed Loop Performance Controller.
  Jeremy Andrus, John Dorsey, James Magee, Daniel Chimene, Cyril de la Cropte de Chanterac, Bryan Hinch, Aditya Venkataraman, Andrei Dorofeev, Nigel Gamble, Russell Blaine, and Constantin Pistol.

- **US Patents 9866805, 8577169**
  Digital Image Processing and Systems Incorporating the Same.
  Jon Bechtel, Jeremy Andrus, and Tom Sherman.

- **US Patent 9830176**
  Methods, Systems, and Media for Binary Compatible Graphics Support in Mobile Operating Systems.
  Jeremy Andrus, Naser AlDuaij, and Jason Nieh.

- **US Patents 9641773, 9013616, 8305471, 8289430**
  High Dynamic Range Imaging Device.
  Jon Bechtel, and Jeremy Andrus.

- **US Patent 9465734**
  Coalition Based Memory Management.
  Andrew Myrick, Lionel Desai, Jeremy Andrus, Karen Crippes, and Joseph Auricchio.

- **US Patents 9230183, 8456327**
  Automatic Vehicle Equipment Monitoring, Warning, and Control System.
  Jon Bechtel, Jeremy Andrus, Gregory Bush, David Wright, Jim Schneider, and Tom Sherman.

- **US Patents 8890985, 8629927, 8587706, 8378284, 8144223**
  Imaging Device.
  Jon Bechtel, and Jeremy Andrus.

- **US Patent 8463035**
  Digital Image Processing for Calculating a Missing Color Value.
  Jon Bechtel, Jeremy Andrus, and Tom Sherman.

- **US Patents 7920601, 7405650**
  Device with Improved Serial Communication.
  Jeremy Andrus, Timothy Friend, Jon Bechtel, and Robert Turnbull.

SERVICE

Technical Program Committee:

Mobile Systems, Applications, and Services (MobiSys), 2020, 2019, 2018, 2016

ACM Symposium on Cloud Computing (SoCC), 2019

Hot Topics in Mobile Computing (HotMobile), 2017

USENIX Annual Technical Conference (ATC), 2015

Talks:

ACM Symposium on Operating Systems Principles (SOSP), 2017, Birds-of-a-Feather, "Dynamic, Priority-Aware, Multi-Threaded Event Delivery."