

# RESUME

Christoffer Dall  
Peblinge Dosserring 32, 3.tv.  
2200 København N  
Denmark

**Tel** +45 31 31 71 50  
**E-mail** christofferdall@gmail.com  
**Skype** christofferdall

## Education

- 2010 – 2016**      **PhD in Computer Science (expected)**      **Columbia University**  
My research area was operating systems, specifically on mobile and embedded devices. I was working in the Software Systems Lab with a focus on virtualization technologies and operating system principles. My advisor was Jason Nieh. The PhD program consists of a breadth requirement (10 courses), teaching experience, candidacy exam, research, thesis proposal and thesis defense. Completed everything but thesis proposal and defense.
- Achievements include:
- Won the Andrew P. Kosoresow Memorial Award for Excellence in Teaching
  - Won Best-Paper award at SOSP 2011
  - Developed *Cells: A Virtual Mobile Smartphone Architecture*
  - Taught operating systems and introduced code review as a teaching tool
  - Linux maintainer of KVM for ARM port
  - Ported Linux checkpoint/restart to ARM
- 2008 - 2009**      **MS. in Computer Science (GPA 4.0+)**      **Columbia University**  
At Columbia I followed classes and did research on virtualization. The program combined classical classroom education with research.
- Achievements include:
- Started KVM for ARM project capable of running flat binaries inside the hypervisor.
  - Formally verified virtualization primitives on KVM inside the Linux Kernel using model checking techniques.
  - Worked on process virtualization Zap and desktop computer recorder DejaView.
- 2005 - 2008**      **B.Sc. in Computer Science**      **Copenhagen University**  
Computer Science and Mathematics.
- Achievements include:
- B.Sc. Thesis on storage elements in grid computing.
  - Project on recreational route planning in rural environments involving graph theory and optimization algorithms.
- 2003-2004**      **Economics**      **Copenhagen University**  
Studied one year of micro- and macroeconomics, financial math and accounting.

# RESUME

## Publications

- 2016** Christoffer Dall, Shih-Wei Li, Jintack Lim, Jason Nieh, and Georgios Koloventzos  
"**ARM Virtualization: Performance and Architectural Implications** "  
Proceedings of the 43rd International Symposium on Computer Architecture (ISCA 2016)
- 2014** Christoffer Dall and Jason Nieh.  
"**KVM/ARM: The Design and Implementation of the Linux ARM Hypervisor**"  
(ASPLOS 2014), Salt Lake City, UT, March 2014
- 2014** Jeremy Andrus, Alexander Van't Hof, Naser AlDuaij, Christoffer Dall, Nicolas Viennot, and Jason Nieh.  
"**Cider: Native Execution of iOS Apps on Android**"  
ASPLOS 2014, Salt Lake City, UT, March 2014
- 2014** Christoffer Dall and Jason Nieh.  
"**Teaching Operating Systems Using Code Review**"  
SIGCSE 2014, Atlanta, Georgia, March 5-8, 2014
- 2012** Christoffer Dall, Jeremy Andrus, Alexander Van't Hof, Oren Laadan, and Jason Nieh.  
"**The Design, Implementation, and Evaluation of Cells: A Virtual Smartphone Architecture**"  
ACM Transactions on Computer Systems (TOCS), Volume 30, Issue 3, August, 2012
- 2011** Jeremy Andrus, Christoffer Dall, Alexander Van't Hof, Oren Laadan, and Jason Nieh.  
"**Cells: A Virtual Mobile Smartphone Architecture**"  
SOSP 2011 (Best Paper Award), Cascais, Portugal.
- 2010** Christoffer Dall and Jason Nieh.  
"**KVM for ARM**"  
Proceedings of the 12th Annual Linux Symposium, Ottawa, Canada, July 13-16, 2010.

## Technical Skills

- Expert** C programming language
- Expert** Python, Java, C#, VB.NET programming languages
- Expert** Linux kernel and driver development
- Expert** ARM and A64 (ARM 64-bit) assembly
- Expert** ARM architectures including in-depth experience with ARMv5, ARMv6, ARMv7, and ARMv8 architecture versions.
- Expert** Virtualization technologies
- Expert** SQL and database technologies (Oracle, MS SQL, MySQL, SqlLite)
- Expert** Bash, Regular Expressions, GNU Makefiles
- Expert** Android Operating System and application framework
- Familiar** PCIe and MSI-X technology and integration with interrupt controllers and IOMMUs
- Familiar** Objective-C and iPhone/iPad development
- Familiar** Web-technologies (HTML, JS, CSS, Django, Umbraco)
- Other** Excellent problem-solving and analytical skills  
Excellent at planning, documenting and communicating my work

# RESUME

## Teaching Experience

2011	Operating Systems COMS w4118	Columbia University New York, USA
2005	Introductory math for business majors	Copenhagen Business School Copenhagen, Denmark

## Professional Activities

2016	Reviewer	IEEE Computer Architecture Letters
2016	Reviewer	Transactions on Mobile Computing
2014	Reviewer	ASPLOS 2015
2013	Linux Kernel Subsystem Maintainer	Linux kernel KVM for arm and arm64
2010	Reviewer	2nd Asia-Pacific Workshop on Systems 2011
2010	Reviewer	Usenix ATC 2011

## Professional Experience

2013 - present	<b>Linaro</b> Technical manager for the virtualization team at Linaro. The team is responsible for ARM-based virtualization technologies using open source technologies such as KVM, QEMU, and Xen. The team is geographically distributed with great talent daily contributing their work upstream into the Linux Kernel, QEMU, Xen and other code bases. The overall technical goal is to obtain feature-parity with x86 for open-source virtualization. I maintain KVM for ARM/ARM64 in the Linux Kernel.	<b>Virtualization Tech Lead</b>
2013	<b>CloudCar Inc.</b> Working as part of the core platform team in a stealth startup developing next-generation automotive infotainment solutions involving virtualization, early boot techniques, SoC power coordination, and USB connectivity.	<b>Senior Software Engineer</b>
2011 – 2012	<b>Apple vs. HTC (ITC 337-TA-797)</b> Source code review and claim construction.	<b>Consultant</b>
2011 – 2013	<b>Consultant</b> Developer and maintainer of the KVM/ARM open-source system based on Cortex-A15 and future generation multicore processors. Lead of design and implementation of the hypervisor and strategic tech lead for services based on KVM technology.	<b>Virtual Open Systems</b>
2009	<b>External consultant</b> Building on the success of the internship, we entered a consulting contract for 6 months of work on the mobile hypervisor.	<b>VMWare R&amp;D</b>
2009	<b>Technical Intern</b> As an intern in VMWare I worked on their Mobile Virtualization Platform (MVP). I did work on the hypervisor itself.  Achievements include a scratch implementation of checkpoint/restart in a hypervisor and researched x86-based ARM emulation solution for customers.	<b>VMWare R&amp;D</b>

# RESUME

**2001-2008**                      **Application Developer**    **Carnegie Asset Management A/S**  
Developed system-level applications and monitoring tools for the core investment banking and asset management business.

Achievements include:

- Developed and integrated an Early Warnings System, which monitored business critical transactions, servers, websites and mores.
- Planned and implemented a complete financial data system integration solution between the central and satellite offices.
- Planning and implementation of virtualized infrastructure compliant with Danish legislation including remote backup site maintenance.

**2005-2006**                      **Consultant**    **First Treasury A/S**  
Consultant for the clients of First Treasury, which consisted of Danish pension funds, mortgage companies and investment banks. Tasks ranged from software development to IT strategy consulting.

Achievements include:

- In charge of technical optimization of the financial system installation at one of the biggest Danish credit institutions. Successful outcome.
- Assisted customers in creating financial reporting solutions.
- Taught internal programming courses to other consultants.

**1998 – 2001**                      **Founder**    **Chazy IT**  
Founded a small company that delivered web sites and infrastructure solutions.

## Awards and Fellowships

<b>2013</b>	Andrew P. Kosoresow Memorial Award for Excellence in Teaching
<b>2011 and 2012</b>	ARM Research Fellowship
<b>2012</b>	Finalist in the 2012 Qualcomm Innovation Fellowship Award
<b>2011</b>	2011 SOSP Best Paper Award for “Cells: A Virtual Mobile Smartphone Architecture”
<b>2011</b>	SOSP Student Scholarship from Akamai Technologies
<b>2009</b>	Reinhold W Jorck and Wife’s Foundation Grant
<b>2008</b>	Rudolph Als’ Foundation Grant
<b>2008</b>	The Nordea Foundation Grant
<b>2008</b>	Otto Monsteds Foundation Grant
<b>2008</b>	Henry and Mary Skovs Fellowship
<b>2008</b>	Henry Shaw’s Fellowship

## Additional information

**Languages**                      Danish (mother tongue), English (excellent at speaking and writing)