

Paarijaat Aditya

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Objective: Identify-initialize-implement multidisciplinary disruptive tech products using rapid prototyping & actual deployments

■ Education

- 2009– Oct 2017 **Ph.D. in Computer Science**, Max Planck Institute for Software Systems, Germany
(expected) **Thesis: Towards Privacy-Compliant Mobile Computing**
Preventing privacy risks to users' personal data created by everyday usage of smartphones & wearables.
Advisor: Peter Druschel
- 2002–2006 **B.E. in Computer Science**, Delhi College of Engineering, New Delhi, India
Grade: among the top 10% (first division with honors)

■ Work Experience

- 2009–Now **Ph.D. Researcher, Max Planck Institute for Software Systems, Germany**
- 2014–16 **I-Pic: A Platform for Privacy-Compliant Image Capture** (MobiSys '16, first author)
Automatically blur faces of bystanders in images to respect their privacy. **Machine Learning, Cryptography** and **Bluetooth** communication combined into a single Android app and deployed.
- 2012–14 **EnCore: Private, Context-based Communication for Mobile Social Apps** (MobiSys '14, first author)
Anonymously share content with nearby strangers & friends. Energy efficient Bluetooth discovery and encrypted communication via **Facebook APIs** combined in an **Android app**. Multiple real world deployments.
- 2010–12 **Reliable Client Accounting for Hybrid Content-Distribution Networks** (NSDI '12, first author)
Detect misbehaving clients in a hybrid CDN. Designed a **network simulator** (in C++) and performed **Data Analytics** on terabytes of logs files from production servers using Python.
- 2009–10 **Accountable Virtual Machines** (OSDI '10, second author)
Detect misbehaving nodes in a generalized distributed system. Integrated our algorithm with **VMware source code** and optimized **kernel level code**.
- 2006–2009 **Software Developer, Adobe Systems India Pvt. Ltd, India**
Developer for **Adobe Media Server (AMS)** - real time video streaming server for Windows & Linux (C++)
- 2008-09 **Live video streaming from mobile devices (Personal initiative)**
Ported Adobe's RTMFP protocol on a mobile device & used it for streaming live video to AMS.
- 2007-08 **Adaptive video streaming prototype for AMS**
Enhanced server to dynamically adjust video bitrate based on available bandwidth. Now used in production.
- 2007 **New object serialization format for AMS (Received Special Contribution Award)**
Responsible for updating all core features of the server while maintaining backward compatibility.
- 2006-07 **On-the-fly video transcoding for AMS**
Developed a transcoding server cluster with fault tolerant capabilities using Apache server modules (C++).

■ Technical skills

Languages	C, C++, Java, JavaScript, Matlab	Versioning	SVN, Git, Perforce
Scripting	Python, Linux Shell Scripting, HTML	Databases	MySQL, SQLite
OS (desktop)	Linux (Debian, Ubuntu), Windows	Development	Eclipse, NetBeans, Visual Studio
OS (mobile)	Android (4.0 & above), iOS	Machine learning	Caffe, scikit-learn

■ Publication List

- 2016 **Paarijaat Aditya**, Rijurekha Sen, Seong Joon Oh, Rodrigo Benenson, Bobby Bhattacharjee, Peter Druschel, Tongtong Wu, Mario Fritz, Bernt Schiele. I-Pic: A Platform for Privacy-Compliant Image Capture. *14th International Conference on Mobile Systems, Applications, and Services (MobiSys 2016)*.
- 2014 **Paarijaat Aditya**, Viktor Erdélyi, Matthew Lentz, Elain Shi, Bobby Bhattacharjee, Peter Druschel. EnCore: Private, Context-based Communication for Mobile Social Apps. *12th International Conference on Mobile Systems, Applications, and Services (MobiSys 2014)*.
- 2014 **Paarijaat Aditya**, Viktor Erdélyi, Matthew Lentz, Elaine Shi, Peter Druschel, Bobby Bhattacharjee. Brave New World: Privacy Risks for Mobile Users. *Workshop on Security and Privacy Aspects of Mobile Environments (SPME 2014)*.
- 2014 **Paarijaat Aditya**, Viktor Erdélyi, Matthew Lentz, Elaine Shi, Peter Druschel, Bobby Bhattacharjee. Brave New World: Privacy Risks for Mobile Users. *ACM SIGMOBILE Mobile Computing and Communications Review (M2CR 2014)*, 18(3), 2014.
- 2014 Matthew Lentz, Viktor Erdélyi, **Paarijaat Aditya**, Elaine Shi, Peter Druschel, Bobby Bhattacharjee. SDDR: Light-Weight, Secure Mobile Encounters. *23rd USENIX Security Symposium (USENIX Security 2014)*.
- 2013 Mingchen Zhao, **Paarijaat Aditya**, Ang Chen, Yin Lin, Andreas Haeberlen, Peter Druschel, Bruce Maggs, Bill Wishon, Miroslav Ponec. Peer-Assisted Content Distribution in Akamai NetSession. *13th ACM SIGCOMM Conference on Internet Measurement (IMC 2013)*.
- 2012 **Paarijaat Aditya**, Mingchen Zhao, Yin Lin, Andreas Haeberlen, Peter Druschel, Bruce Maggs, Bill Wishon. Reliable Client Accounting for Hybrid Content-Distribution Networks. *9th USENIX Symposium on Networked Systems Design and Implementation (NSDI 2012)*.
- 2010 Andreas Haeberlen, **Paarijaat Aditya**, Rodrigo Rodrigues, Peter Druschel. Accountable Virtual Machines. *9th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2010)*.

■ Extra Curricular

Talks and Presentations

- MobiSys 2016, I-Pic: A Platform for Privacy-Compliant Image Capture
- MobiSys 2014, EnCore: Private, Context-based Communication for Mobile Social Apps
- NSDI 2012, Reliable Client Accounting for Hybrid Content-Distribution Networks

Research Community Contributions

- Reviewer for IEEE/ACM Transactions on Networking, Oct 2016
- External reviewer for COMSNET 2016
- Technical Program Committee member for ACM S3 2015 Workshop

Teaching Experience

Teaching Assistant, *Distributed Systems*, 2010, Saarland University, Germany

■ Personal Information

- **Spoken languages:** English (fluent), Hindi (native speaker), German (beginner, A1)
- Born: Feb 2nd 1983, New Delhi, India

■ References

- Peter Druschel, Scientific Director, Max Planck Institute for Software Systems, Germany
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- Bobby Bhattacharjee, Professor, University of Maryland, College Park, USA
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- Andreas Haeberlen, Associate Professor, University of Pennsylvania, Philadelphia, USA
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