

# Piyus Kedia

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## EDUCATION

### Indian Institute of Technology, Delhi

- Ph.D. in Information Technology Jul 2010– Nov 2018
  - Thesis: Dynamic Binary Translation for Deterministic Replay
  - Advisor: Sorav Bansal
  - Research area: Operating Systems
  - CGPA: 8.2

### University of Kalyani

- B. Tech. in Information Technology Aug 2006 – May 2010
- Percentage - 85.8%

## EXPERIENCE

### Indraprastha Institute of Information Technology, Delhi

- Assistant Professor Mar 2018 – Ongoing

## PUBLICATIONS

K. Chitre, P. Kedia, R. Purandare, “Rapid: Region-Based Pointer Disambiguation”, *OOPSLA*, Oct 2023.

P. Kedia, R. Purandare, U. Agarwal, Rishabh, “CGuard: Efficient Spatial Safety for C”, *ISSTA*, Jul 2023.

K. Chitre, P. Kedia, R. Purandare, “The road not taken: exploring alias analysis based optimizations missed by the compiler”, *OOPSLA*, Oct 2022.

A. Brahmakshatriya, P. Kedia, H. Nameti, D. P. McKee, D. Garg, A. Lal, A. Rastogi, A. Panda, P. Bhatu, “ConfLLVM: A Compiler for Enforcing Data Confidentiality in Low-level Code”, *EuroSys*, Mar 2019.

P. Kedia, M. Costa, M. Parkinson, K. Vaswani, D. Vytiniotis, A. Blankstein, “Simple, fast and safe manual memory management”, *PLDI*, Jun 2017.

S. Jaffer, P. Kedia, S. Bansal, “Improving Remote Desktopting through Adaptive Record/Replay”, *VEE*, Mar 2015.

P. Kedia, S. Bansal, “Fast Dynamic Binary Translation for the Kernel”, *SOSP*, Nov 2013.

P. Kedia, S. Bansal, D. Deshpande, S. Iyer, “Building Resilient Cloud Over Unreliable Commodity Infrastructure”, *IEEE Cloud Computing for Emerging Markets*, Oct 2012.

## RESEARCH INTERESTS

Systems security, Compiler optimizations, Safe languages, Virtualization, OS kernel design.

## ACADEMIC AWARDS

IBM PhD Fellowship

Aug 2011 – Aug 2014

**OPEN SOURCE**

- CGuard: Efficient Spatial Safety for C
- Fast dynamic binary translation for the kernel
- Record/replay in QEMU

**TEACHING**

- Compilers
- Operating Systems
- Advanced Operating Systems
- Decision Procedures
- Data Structures and Algorithms