

KELE HUANG

Institute of Computing Technology, Chinese Academy of Sciences

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🎓 EDUCATION

Institute of Computing Technology, Chinese Academy of Sciences Sep.2018 - Jul.2021

M.S., in Computer Architecture

- Advisor: Prof. Jian Wang
- Research Areas: System
- GPA: 3.39/4

Central South University Sep.2014 - Jul.2018

Bachelor student in Microelectronics Science and Engineering, Rank: 2nd/50

📖 PUBLICATIONS

- **Kele Huang**, Fuxin Zhang, Cun Li, Gen Niu, Junrong Wu, Tianyi Liu. "BTMMU: An Efficient and Versatile Cross-ISA Memory Virtualization", is accepted to ACM SIGPLAN/SIGOPS International Conference on Virtual Execution Environments (VEE), 2021.
- Wu Junrong, Zongzheng Wen, Sanyuan Zhao, **Kele Huang**. "Video semantic segmentation via feature propagation with holistic attention." Pattern Recognition (PR), 2020.

👥 RESEARCH EXPERIENCE

Cross-ISA Memory Virtualization Mar.2020 - Mar.2021

Role: Graduate Researcher

Advisor: Prof. Fuxin Zhang

- Characterized and evaluated the existing optimal approaches, including ESPT (VEE 2014), HSPT (VEE 2015) and Captive (TOCS 2020) with respect to efficiency and applicability.
- Proposed an efficient and versatile cross-ISA memory virtualization method named BTMMU, which solved almost all known limitations in cross-ISA memory virtualization. Paper was accepted to [VEE 2021].

User Mode Binary Translator Based on QEMU Jul.2019 - Mar.2020

Role: Graduate Research Assistant

Advisor: Prof. Fuxin Zhang

- Used register mapping, translation block link methods to emulate the guest's userland binary based on QEMU.
- A patent "A fast emulation of x87 float stack method" was accepted as the first inventor.

📄 Open Source Community

- Fixed the self-modifying code support bug of MIPS backend (QEMU).
- Fixed the performance bug of MIPS's software TLB (QEMU).

🏆 AWARDS

<i>Outstanding Student</i>	UCAS	June. 2021
<i>Outstanding Student</i>	Key Laboratory of Computer System and Architecture, ICT CAS	Jan. 2020
<i>National Scholarship</i>		Sep. 2017
<i>Provincial Second Prize</i>	University Student Electronic Design Competition in Hunan Province	Jul. 2016

⚙️ SKILLS

- Skilled in C, vim, git, Linux.
- President of Central South University Electronic Design Fans Association in Sophomore.