Xiangpeng Hao

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EDUCATION

University of Wisconsin Madison, Wisconsin, US

 $Ph.D. \; (fellowship) \; in \; Computer \; Science \\ \hspace*{2.5cm} Sept. \; 2020 \; \text{-} \; June. \; 2025 (expected)$

Advisor: Prof. Xiangyao Yu

Simon Fraser University, Vancouver, Canada

Bachelor of Science (Dual Degree), Computer Science Sept. 2017 - June. 2020

Zhejiang University, Hangzhou, China

Bachelor of Engineer (Dual Degree), Computer Science Sept. 2015 - June. 2020

RESEARCH EXPERIENCE

Researcher at Shanghai Qizhi Institute

Shanghai, China

Advisor: Prof. Yihan Gao (Tsinghua University)

Sept. 2020 - Present

Explored the design principles of next generation OLTP systems with persistent memory as main storage.

Research Assistant in Database Group

Vancouver, CA

Advisor: Prof. Tianzheng Wang

Dec. 2018 - Aug. 2020

Researched on data-intensive systems and related topics that impact the design of database systems, especially how persistent memory will impact the database index design.

Research Assistant in Computer Vision Group

Vancouver, CA

Advisor: Prof. Brian Funt

Feb. - Dec. 2018

Researched on colour constancy algorithms and related topics that guide the colour constancy research.

Teaching Assistant for Operating System

Vancouver, CA

Explained theory behind modern operating systems to 2nd-year Undergraduate student and guiding them in lab practicals.

May - Aug. 2019

PUBLICATIONS

Xiangpeng Hao, Lucas Lersch, Tianzheng Wang, Ismail Oukid. PiBench Online: Interactive Benchmarking of Persistent Memory Indexes: 45th International Conference on Very Large Data Bases (VLDB 2020)

Baotong Lu, **Xiangpeng Hao**, Tianzheng Wang, Eric Lo. **DASH: Dynamic and Scalable Hashing on Persistent Memory**. 45th International Conference on Very Large Data Bases (VLDB 2020)

Lucas Lersch, **Xiangpeng Hao**, Ismail Oukid, Tianzheng Wang, Thomas Willhalm. **Evaluating Persistent Memory based Range Indexes.** 45th International Conference on Very Large Data Bases (VLDB 2020)

Xiangpeng Hao, Brian Funt, Hanxiao Jiang. Evaluating Colour Constancy on the new MIST dataset of Multi-Illuminant Scenes. 27th Color Image Conference, oral preview (CIC 2019)

Xiangpeng Hao, Brian Funt. A Multi-illuminant Synthetic Image Test Set. Color Research and Application

RESEARCH PROJECTS

Open-source BzTree Implementation

Dec. 2018 - May 2019

Implemented a fully-functional BzTree in C++ and benchmarked on both main mem-

ory and persistent memory. Extended PMwCAS to allow safe allocation, and also extended its API so that PMwCAS can support more real world use cases.

Spectral Renderer

July. - Dec. 2018

Extended Blender Cycles to allow physically-accurate spectral rendering. It is the first and only rendering engine that supports texture spectral rendering, and it is used to generate physically colour-accurate images that help the computer vision community.

AWARDS

Inaugural CRSC Student Award for Canadian Colour Research
Sciences Undergraduate Research Student Award (VPR)

SFU Undergraduate Open Scholarship
SFU Entrance Scholarship
SFU Entrance Scholarship
China National VEX Competition (Gold medal)

May 2020
May 2019
Sept. 2017
Jul. 2015