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会议地址:成都世外桃源酒店 (玫瑰厅 3 六楼-150)

会议网页: https://www.acmturc.com/2019/cn/SIGOPS.html

Day 1: May 17<sup>th</sup>

| Time      | Talks   |
|-----------|---|
| 8:00-8:10 | Opening Remarks:  |
|           |   |
| 8:10-9:10 | Keynote 1   |
|           | Topic: Accelerating Distributed DNN Training                                |
|           | Speaker: Chuanxiong Guo (Director, Bytedance Al Lab)                        |
|           | Chair: Wenguang Chen  |
| 9:10-     | Session 1: Deep learning  |
| 10:30     | Chair: TBD  |
|           | Large-scale GraphNN System  |
|           | Wei Lin (Alibaba group)   |
|           | A Comprehensive Graph Neural Network Overview in Practice                   |
|           | Hongxia Yang (Alibaba group), Chang Zhou (Alibaba group)                    |
|           | SeerNet: Predicting Convolutional Neural Network Feature-Map Sparsity       |
|           | through Low-Bit Quantization  |
|           | Chen Zhang (Microsoft), Yunxin Liu (Microsoft) and Lintao Zhang (Microsoft) |
|           | A Machine Leaning Framework with Feature Selection for Floorplan            |
|           | Evaluation in IC Physical Design  |
|           | Shuzheng Zhang (National University of Defense Technology), Zhenyu Zhao     |
|           | (National University of Defense Technology), Chaochao Feng (National        |
|           | University of Defense Technology), Lei Wang (National University of Defense |
|           | Technology)   |
| 10:30-    | Tea Break   |
| 10:50     |   |
| 10:50-    | Session 2: Cloud & Virtualization   |
| 12:10     | Chair: TBD  |
|           | TPShare: A Time-Space Sharing Scheduling abstraction for Shared Cloud       |
|           | via Vertical Labels   |
|           | Yuzhao Wang (Huazhong University of Science & Technology, Shenzhen          |
|           | Institutes of Advanced Technology), Lele Li (Shenzhen Institutes of         |
|           | Advanced Technology), You Wu (University of Southern California), Junqing   |
|           | Yu (Huazhong University of Science & Technology), Zhibin Yu (Shenzhen       |

|        | Institutes of Advanced Technology), Xuehai Qian (University of Southern      |
|--------|--|
|        | California)  |
|        | Phantasy: Low-Latency Virtualization-based Fault Tolerance via               |
|        | Asynchronous Prefetching   |
|        | Zhen Xiao (Peking University)  |
|        | Characterization of Co-located Container Workloads with Hardware             |
|        | Performance Counters   |
|        | Wenyan Chen (Shenzhen institutes of advanced techology chinese academy       |
|        | of sciences), Kejiang Ye (Shenzhen institutes of advanced techology chinese  |
|        | academy of sciences) and Cheng-Zhong Xu (Shenzhen institutes of advanced     |
|        | techology chinese academy of sciences)                                       |
|        | A Preliminary Evaluation on Many-to-one Virtualization                       |
|        | Jin Zhang (Shanghai Jiao Tong University), Zhuocheng Ding (Shanghai Jiao     |
|        | Tong University), Yubin Chen (Shanghai Jiao Tong University), Zhengwei Qi    |
|        | (Shanghai Jiao Tong University) and Haibing Guan (Shanghai Jiao Tong         |
|        | University)  |
| 12:10- | Lunch and Break  |
| 14:00  |  |
| 14:00- | Session 3: Memory  |
| 15:20  | Chair: TBD   |
|        | Precise Memory Object Life Cycle Modeling in Memory SSA                      |
|        | Shin-Ming Liu (XC5 Limited), Long Li (XC5 Limited) and Sun Chan (XC5         |
|        | Limited)   |
|        | Panthera: Holistic Memory Management for Big Data Processing over            |
|        | Hybrid Memories  |
|        | Chenxi Wang (Institute of Computing Technology, CAS), Huimin Cui (Institute  |
|        | of Computing Technology, CAS), Ting Cao (Microsoft), John Zigman (The        |
|        | University of Sydney), Haris Volos (HP Lab), Onur Mutlu (Carnegie Mellon     |
|        | University), Fang Lv (Institute of Computing Technology, CAS), Xiaobing Feng |
|        | (Institute of Computing Technology, CAS) and Harry Xu (University of         |
|        | California, Los Angeles)   |
|        | Huge Page-Friendly Virtualized Memory Management                             |
|        | Sai Sha (Peking University), Jingyuan Hu (Peking University), Yingwei Luo    |
|        | (Peking University), Xiaolin Wang (Peking University) and Zhenlin Wang       |
|        | (Michigan Technolgoical University)  |
|        | IMPULP: A Hardware Approach for In-process Memory Protection via             |
|        | User-Level Partitioning  |
|        | Yangyang Zhao (University of Chinese Academy of Sciences; ICT, Chinese       |
|        | Academy of Sciences), Mingyu Chen (Institute of Computing Technology,        |
|        | Chinese Academy of Sciences), Yuhang Liu (Institute of Computing             |
|        | Technology, Chinese Academy of Sciences), Zonghao Yang (University of        |
|        | Chinese Academy of Sciences; ICT, Chinese Academy of Sciences), Xiaojing     |
|        | Zhu (Institute of Computing Technology, Chinese Academy of Sciences),        |
|        | Zonghui Hong (Institute of Computing Technology, Chinese Academy of          |
|        |  |

|        | Sciences) and Yunge Guo (Institute of Computing Technology, Chinese          |
|--------|--|
|        | Academy of Sciences)   |
| 15:20- | Break  |
| 15:40  |  |
| 15:40- | Session 4: System Optimization   |
| 17:00  | Chair: TBD   |
|        | From Static Dataflow to Dynamic, and Pull Back                               |
|        | Peng Cao (Ant Financial), Jie Wang (Ant Financial) and Zhenyu Guo (Ant       |
|        | Financial)   |
|        | pLock: A Fast Lock for Architectures with Explicit Inter-core Message        |
|        | Passing  |
|        | Xiongchao Tang (Tsinghua University), Jidong Zhai (Tsinghua University),     |
|        | Xuehai Qian (University of Southern California) and Wenguang Chen            |
|        | (Tsinghua University)  |
|        | MPI-RCDD: A Framework for MPI Runtime Communication Deadlock                 |
|        | Detection  |
|        | Wei Hongmei (Shanghai Jiao Tong University) and Gao Jian (Jiangnan Institute |
|        | of Computing Technology)   |
|        | Optimisitc Transaction Processing in Deterministic Database                  |
|        | Zhiyuan Dong (Shanghai Jiao Tong University), Chuzhe Tang (Shanghai Jiao     |
|        | Tong University), Jiachen Wang (Shanghai Jiao Tong University), Zhaoguo      |
|        | Wang (Shanghai Jiao Tong University) and Haibo Chen (Shanghai Jiao Tong      |
|        | University)  |
| 17:00- | Panel  |
| 18:00  | Open Source Chip and Its Ecosystem   |
|        | Chair: Yungang Bao   |

## Day 2: May 18<sup>th</sup> (afternoon)

| Time   | Talks  |
|--------|--|
| 13:30- | Keynote 3  |
| 14:30  | Fast, Safe User-Level Services   |
|        | Speaker: Michael L. Scott (Arthur Gould Yates Professor of Engineering, CS,  |
|        | University of Rochester)   |
|        | Chair: Haibo Chen  |
| 14:30- | Session 5: Cloud   |
| 15:50  | Chair: TBD   |
|        | Fast Startup for Serverless Computing with Initialization-less Loading       |
|        | Dong Du (Shanghai Jiao Tong University), Tianyi Yu (Shanghai Jiao Tong       |
|        | University), Yubin Xia (Shanghai Jiao Tong University), Haibo Chen (Shanghai |
|        | Jiao Tong University), Binyu Zang (Shanghai Jiao Tong University),           |
|        | Chenggang Qin (Alibaba group) and Qixuan Wu (Alibaba group)                  |
|        | Improving Resource Efficiency with Fine-grained Control over Cloud           |

|        | Service Components   |
|--------|--|
|        | Laiping Zhao (Tianjin University) and Yanan Yang (Tianjin University)                              |
|        | GAugur: Quantifying Performance Interference of Colocated Games for                                |
|        | Improving Resource Utilization in Cloud Gaming   |
|        | Yusen Li (Nankai University), Chuxu Shan (Nankai University), Ruobing Chen                         |
|        | (Nankai University), Xueyan Tang (Nanyang Technological University),                               |
|        | Wentong Cai (Nanyang Technological University), Shanjing Tang (Tianjin                             |
|        | University), Gang Wang (Nankai University), Xiaoguang Liu (Nankai University),                     |
|        | Xiaoli Gong (Nankai University) and Ying Zhang (Nankai University)                                 |
|        | Bigflow: a general optimization layer for distributed computing                                    |
|        | frameworks   |
|        | Yuncong Zhang (Baidu Inc.), Xiaoyang Wang (Peking University), Yao Xu (Baidu                       |
|        | Inc.), Jianwei Zhang (Baidu Inc.), Xiaodong Lin (Baidu Inc.), Guangyu Sun                          |
|        | (Peking University), Gonglin Zheng (Baidu Inc.), Shanhui Yin (Baidu Inc.), Xianjin                 |
|        | Ye (Baidu Inc.), Li Li (Baidu Inc.), Zhan Song (Baidu Inc.), Dongdong Miao (Baidu                  |
|        | Inc.) and Xiangwei Liu (Baidu Inc.)  |
| 15:50- | Tea Break  |
| 16:10  |  |
| 16:10- | Session6: Acceleration   |
| 17:30  | Chair: TBD   |
|        | LAcc: Exploiting Lookup Table-based Fast and Accurate Vector                                       |
|        | Multiplication in DRAM-based CNN Accelerator   |
|        | Quan Deng (College of Computer, National University of Defense                                     |
|        | Technology)  |
|        | SIES: A novel Implementation of the Spiking Convolutional Neural                                   |
|        | Network Inference Engine on FPGA   |
|        | Shuquan Wang (National University of Defense Technology) and Lei Wang                              |
|        | (National University of Defense Technology)  |
|        | A Systolic Accelerator for Real-time Edge Intelligence System                                      |
|        | Tian Shuo (National University of Defense Technology), Wang Lei (National                          |
|        | University of Defense Technology) and Dou Qiang (National University of                            |
|        | Defense Technology)  |
|        | Poly: Efficient Heterogeneous System and Application Management for                                |
|        | Interactive Applications Shup Wang (Poking University) Yun Liang (Poking University) and Wei Zhang |
|        | Shuo Wang (Peking University), Yun Liang (Peking University) and Wei Zhang                         |
| 17:30- | (Peking University)  |
| 17:40  | Concluding Remarks   |
| 11.40  |  |