

## R244: Paper Review Presentation Assignment

### 2021/10/18 Session 2: Data flow programming

**zs391 (Zak) 6.2.** D. Murray, F. McSherry, R. Isaacs, M. Isard, et al.: [Naiad: A Timely Dataflow System](#), SOSP, 2013.

**clp66 (Conor) 8.** M. Abadi et al. [Tensorflow: A system for large-scale machine learning](#). OSDI, 2016.

**You can also read: 10.** M. Abadi, M. Isard and D. Murray: [A Computational Model for TensorFlow - An Introduction](#), MAPL, 2017.

**az396 (Andreea) 3.** J. Gjengset, M. Schwarzkopf, J. Behrens, L. T. Araujo, M. Ek, E. Kohler, M. F. Kaashoek and R. Morris: [Noria: dynamic, partially-stateful data-flow for high-performance web applications](#), OSDI 2018.

**ch819 (Charlie) 12.** R. Nishihara, P. Moritz, et al.: [Ray: A Distributed Framework for Emerging AI Applications](#), OSDI, 2018.

**cyp25 (Brady) 13.** M. Schaarschmidt, S. Mika, K. Fricke, E. Yoneki: [RLgraph: Flexible Computation Graphs for Deep Reinforcement Learning](#), SysML, 2019.

### 2021/10/25 Session 3: Large-scale graph data processing

**sws35 (Samuel) 4.** J. Gonzalez, Y. Low, H. Gu, D. Bickson, and C. Guestrin: [Powergraph: distributed graph-parallel computation on natural graphs](#). OSDI, 2012.

**mie24 (Mihai) 5.** J. Shun and G. Blelloch: [Ligra: A Lightweight Graph Processing Framework for Shared Memory](#), PPOPP, 2013.

**aa30 (Alex) 9.** A. Roy, I. Mihailovic, W. Zwaenepoel: [X-Stream: Edge-Centric Graph Processing using Streaming Partitions](#), SOSP, 2013.

**wz341 (Wanru) 19.** Z. Jia, Y. Kwon, G. Shipman, P. McCormick, M. Erez, A. Aiken: [A Distributed Multi-GPU System for Fast Graph Processing](#), VLDB, 2018.

### 2021/11/08 Session 5: Many Aspects of Optimisation in Computer Systems

**az396 (Andreea) 11.** O. Alipourfard et al.: [CherryPick: Adaptively Unearthing the Best Cloud Configurations for Big Data Analytics](#), NSDI, 2017.

**mie24 (Mihai) 30.** R. Marcus, P. Negi, H. Mao, N. Tatbul, M. Alizadeh, and T. Kraska: [Bao: Learning to Steer Query Optimizers](#), VLDB, 2020.

**zs391 (Zak) 31.** A. Paliwal et al.: [REGAL: Transfer Learning For Fast Optimization of Computation Graphs](#), arxiv, 2019.

**clp66 (Conor) 47.** L. Ma, W. Zhang, J. Jiao, W. Wang, M. Butrovich, W.S. Lim, P. Menon, and A. Pavlo: [MB2: Decomposed Behavior Modeling for Self-Driving Database Management Systems](#), SIGMOD, 2021.

### 2021/11/15 Session 6: Probabilistic Programming

**aa30 (Alex) 7.** V. Dalibard, M. Schaarschmidt, and E. Yoneki: [BOAT: Building Auto-Tuners with Structured Bayesian Optimization](#), WWW, 2017.

**wz341 (Wanru) 9.** W. Neiswanger et al.: [ProBO: Versatile Bayesian Optimization Using Any Probabilistic Programming Language](#), Arxiv, 2019.

### 2021/11/22 Session 7: Optimisation of Computer Systems using ML

**zs391 (Zak) 1.** A. Mirhoseini et al.: [Device Placement Optimization with Reinforcement Learning](#), ICML, 2017.

...plus **1.2.** A. Mirhoseini, A. Goldie et al.: [A Hierarchical Mode for Device Placement](#), ICLR, 2018.

**cyp25 (Brady) 45.** D. Aken, D. Yang, S. Brillard, A. Fiorino, B. Zhang, C. Bilen, and A. Pavlo: [An Inquiry into Machine Learning-based Automatic Configuration Tuning Services on Real-World Database Management Systems](#), VLDB, 2021.

**ch819 (Charlie) 39.** G. Li, X. Zhou, S. Li, and B. Gao: [Qtune: RL for DB query optimisation](#), VLDB, 2019.

**sws35 (Samuel) 6.** Z. Jia, O. Padon, J. Thomas, T. Warszawski, M. Zaharia, A. Aiken: [TASO: Optimizing Deep Learning Computation with Automated Generation of Graph Substitutions](#): SOSP, 2019.

**clp66 (Conor) 2.** KH. Wang, J. Zhai, M. Gao, Z. Ma, S. Tang, L. Zheng, Y. Li, K. Rong, Y. Chen, and Z. Jia: [PET: Optimizing Tensor Programs with Partially Equivalent Transformations and Automated Corrections](#), OSDI, 2021.