## HPC Group每周论文汇报

**一、论文汇报情况**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **张云放** | **齐新新** | **孙晓乐** | **欧祉辛** | **孙雨阳** |  |
| **2019.11.16** | √ | √ | √ | √ | √ |  |
| **2019.11.23** | √ | √ | √ | √ | √ |  |
| **2019.12.7** | √ | √ | √ | √ | √ |  |
| **2019.12.14** | √ | √ | √ | √ | √ |  |
| **2019.12.21** | √ | √ | √ | √ | √ |  |
| **2019.12.28** | √ | √ | √ | √ | √ |  |
| **2020.01.04** | **√** | **√** | **x** | **√** | **√** |  |
| **2020.01.11** | **√** | **x** | **√** | **x** | **x** |  |
| **2020.01.18** | **x** | **√** | **√** | **√** | **x** |  |
| **2020.02.15** | **√** | **√** | **√** | **x** | **x** |  |
| **2020.02.22** | **√** | **x** | **x** | **√** | **x** | **孙启尧** |
| **2020.02.29** | **x** | **x** | **√** | **x** | **x** | **蔡顺哲** |
| **2020.03.07** |  |  |  |  |  |  |

**二、汇报论文列表**

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| --- | --- | --- |
| **序号** | **日期 / 汇报人** | **论文名称** |
| 1 | 2019.11.16  齐新新 | Watts as a First Class Parameter for Peak-Power Aware Resource Allocation in Apache Mesos Managed Clouds (IPDPS) |
| 2 | 2019.11.23  齐新新 | Zou P , Allen T , Iv C H D , et al. CLIP: Cluster-Level Intelligent Power Coordination for Power-Bounded Systems[C]// 2017 IEEE International Conference on Cluster Computing (CLUSTER). IEEE, 2017. |
| 3 | 2019.12.07  齐新新 | [Xiongchao Tang](https://dblp.uni-trier.de/pers/hd/t/Tang:Xiongchao), [Haojie Wang](https://dblp.uni-trier.de/pers/hd/w/Wang:Haojie), Xiaosong Ma, [Nosayba El-Sayed](https://dblp.uni-trier.de/pers/hd/e/El=Sayed:Nosayba), [Jidong Zhai](https://dblp.uni-trier.de/pers/hd/z/Zhai:Jidong), [Wenguang Chen](https://dblp.uni-trier.de/pers/hd/c/Chen:Wenguang), [Ashraf Aboulnaga](https://dblp.uni-trier.de/pers/hd/a/Aboulnaga:Ashraf):Spread-n-share: improving application performance and cluster throughput with resource-aware job placement. [SC 2019](https://dblp.uni-trier.de/db/conf/sc/sc2019.html" \l "TangWMEZCA19): 12:1-12:15 |
| 4 | 2019.12.28 齐新新 | R. Ge X. Feng W. Feng and K. W. Cameron. CPU MISER: A performance-directed run-time system for power-aware clusters. In International Conference on Parallel Processing 2007 (ICPP07) 2007. |
| 5 | 2019.12.14  孙晓乐 | Das R , Ausavarungnirun R , Mutlu O , et al. Application-to-core mapping policies to reduce memory system interference in multi-core systems[C]// 2013 IEEE 19th International Symposium on High Performance Computer Architecture (HPCA). IEEE, 2013. |
| 6 | 2019.12.07  欧祉辛 | Dénes Bán, Ferenc R , István Siket, et al. Prediction models for performance, power, and energy efficiency of software executed on heterogeneous hardware[J]. The Journal of Supercomputing, 2018, 3:1-25. |
| 7 | 2019.12.14  欧祉辛 | Deng Q , Meisner D , Bhattacharjee A , et al. CoScale: Coordinating CPU and Memory System DVFS in Server Systems[C]// Microarchitecture (MICRO), 2012 45th Annual IEEE/ACM International Symposium on. ACM, 2012. |
| 8 | 2019.11.23  张云放 | Zamani R , Afsahi A . A study of hardware performance monitoring counter selection in power modeling of computing systems[C]// Green Computing Conference (IGCC), 2012 International. IEEE, 2012. |
| 9 | 2019.11.23  张云放 | Kenneth O’brien, Ilia Pietri, Ravi Reddy, Alexey Lastovetsky, and Rizos Sakellariou. 2017. A Survey of Power and Energy Predictive Models in HPC Systems and Applications. ACM Comput. Surv. 50, 3, Article 37 (June 2017), 38 pages. DOI: <https://doi.org/10.1145/3078811> |
| 10 | 2019.12.07  张云放 | Basmadjian, Robert, Ali, Nasir, Niedermeier, Florian, e. A methodology to predict the power consumption of servers in data centres[C]// Proceedings of the 2nd International Conference on Energy-Efficient Computing and Networking. ACM, 2011. |
| 11 | 2020.01.04  张云放 | Bircher W L , John L K . Complete System Power Estimation Using Processor Performance Events[J]. IEEE Transactions on Computers, 2012, 61(4):563-577. |
| 12 | 2020.01.04  齐新新 | An accelerating solution for optimizing containerized High-Performance LINPACK of different heterogeneous systems. (The Journal of Supercomputing) |
| 13 | 2020.01.04  欧祉辛 | Evaluating the Energy Efficiency of Deep Convolutional Neural Networks on CPUs and GPUs |
| 14 | 2020.01.04  孙雨阳 | Evaluating Multi-Core Platforms for HPC Data-Intensive Kernels. |
| 15 | 2020.01.11  张云放 | M. Khavari Tavana, Y. Sun, N. Bohm Agostini and D. Kaeli, "Exploiting Adaptive Data Compression to Improve Performance and Energy-Efficiency of Compute Workloads in Multi-GPU Systems," 2019 IEEE International Parallel and Distributed Processing Symposium (IPDPS), Rio de Janeiro, Brazil, 2019, pp. 664-674. doi: 10.1109/IPDPS.2019.00075 |
| 16 | 2020.01.11  张云放 | S. Labasan, M. Larsen, H. Childs and B. Rountree, "Power and Performance Tradeoffs for Visualization Algorithms," 2019 IEEE International Parallel and Distributed Processing Symposium (IPDPS), Rio de Janeiro, Brazil, 2019, pp. 325-334. doi: 10.1109/IPDPS.2019.00042 |
| 17 | 2020.01.11  张云放 | S. Ramesh, S. Perarnau, S. Bhalachandra, A. D. Malony and P. Beckman, "Understanding the Impact of Dynamic Power Capping on Application Progress," 2019 IEEE International Parallel and Distributed Processing Symposium (IPDPS), Rio de Janeiro, Brazil, 2019, pp. 793-804. doi: 10.1109/IPDPS.2019.00088 |
| 18 | 2020.01.11  孙晓乐 | Fattah M , Daneshtalab M , Liljeberg P , et al. Smart Hill Climbing for Agile Dynamic Mapping in Many-Core Systems[C]// 50th ACM/IEEE Design Automation Conference (DAC). ACM, 2013. |
| 19 | 2020.01.11  孙晓乐 | Fattah M , Liljeberg P , Plosila J , et al. Adjustable contiguity of run-time task allocation in networked many-core systems[C]// 2014 19th Asia and South Pacific Design Automation Conference (ASP-DAC). IEEE, 2014. |
| 20 | 2020.01.18  齐新新 | Neha Gholkar, Frank Mueller, and Barry Rountree. 2019. Uncore power scavenger: a runtime for uncore power conservation on HPC systems. In Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (SC ’19). Association for Computing Machinery, New York, NY, USA, Article 27, 1–23. DOI:https://doi.org/10.1145/3295500.3356150 |
| 21 | 2020.01.18  欧祉辛 | Rivoire S , Ranganathan P , Kozyrakis C . A Comparison of High-Level Full-System Power Models[C]// Workshop on Power Aware Computing and Systems, HotPower 2008, December 7, 2008, San Diego, CA, USA, Proceedings. DBLP, 2008. |
| 22 | 2020.01.18  孙晓乐 | Papadimitriou, George & Chatzidimitriou, Athanasios & Gizopoulos, Dimitris. (2019). Adaptive Voltage/Frequency Scaling and Core Allocation for Balanced Energy and Performance on Multicore CPUs. 10.1109/HPCA.2019.00033. |
| 23 | 2020.02.15  孙雨阳 | Jang, Hyung & Lee, Jason & Kong, Joonho & Suh, Taeweon & Chung, Sung. (2014). Leveraging Process Variation for Performance and Energy: In the Perspective of Overclocking. IEEE Transactions on Computers. 63. 1-1. 10.1109/TC.2012.286. |
| 24 | 2020.02.15  张云放 | Rajovic N , Rico A , Mantovani F , et al. The Mont-Blanc prototype: An Alternative Approach for HPC Systems[C]// International Conference for High Performance Computing. IEEE Press, 2016. |
| 25 | 2020.02.15  齐新新 | Neha Gholkar, Frank Mueller, and Barry Rountree. 2019. Uncore power scavenger: a runtime for uncore power conservation on HPC systems. In Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (SC ’19). Association for Computing Machinery, New York, NY, USA, Article 27, 1–23. DOI:https://doi.org/10.1145/3295500.3356150 |
| 26 | 2020.02.15  孙晓乐 | Y. Hu, "Topology Mapping of Parallel Applications onto Random Allocations," 2019 IEEE 21st International Conference on High Performance Computing and Communications; IEEE 17th International Conference on Smart City; IEEE 5th International Conference on Data Science and Systems (HPCCCity/DSS), Zhangjiajie, China, 2019, pp. 1437-1444. |
| 27 | 2020.02.22  欧祉辛 | Power Modeling for Phytium FT-2000+/64 Multi-core  Architecture. |
| 28 | 2020.02.22  张云放 | Mantovani, Filippo, Calore, et al. Performance and Power Analysis of HPC Workloads on Heterogeneous Multi-Node Clusters[J]. Journal of Low Power Electronics and Applications, 2018.  [Donglin Chen](https://dblp.uni-trier.de/pers/hd/c/Chen:Donglin), [Jianbin Fang](https://dblp.uni-trier.de/pers/hd/f/Fang:Jianbin), [Chuanfu Xu](https://dblp.uni-trier.de/pers/hd/x/Xu:Chuanfu), [Shizhao Chen](https://dblp.uni-trier.de/pers/hd/c/Chen:Shizhao), Zheng Wang. **Characterizing Scalability of Sparse Matrix-Vector Multiplications on Phytium FT-2000+.** [International Journal of Parallel Programming 48(1)](https://dblp.uni-trier.de/db/journals/ijpp/ijpp48.html" \l "ChenFXCW20): 80-97 (2020) |
| 29 | 2020.02.22  孙启尧 | S. Labasan, M. Larsen, H. Childs and B. Rountree, "Power and Performance Tradeoffs for Visualization Algorithms," 2019 IEEE International Parallel and Distributed Processing Symposium (IPDPS), Rio de Janeiro, Brazil, 2019, pp. 325-334. doi: 10.1109/IPDPS.2019.00042 |
| 30 | 2020.02.29  蔡顺哲 | Tang Z , Wang Y , Wang Q , et al. The Impact of GPU DVFS on the Energy and Performance of Deep Learning: an Empirical Study[J]. 2019.（汇报） |
| 31 | 2020.02.29  蔡顺哲 | Ge R , Vogt R , Majumder J , et al. Effects of Dynamic Voltage and Frequency Scaling on a K20 GPU[C]// Parallel Processing (ICPP), 2013 42nd International Conference on. IEEE, 2013.（阅读） |
| 32 | 2020.02.29  张云放 | Borghesi, Andrea & Bartolini, Andrea & Libri, Antonio & Beneventi, Francesco & Gregori, Daniele & Tinti, Simone & Altoè, Piero. (2018). The D.A.V.I.D.E. Big-Data-Powered Fine-Grain Power and Performance Monitoring Support. 10.1145/3203217.3205863. （阅读） |
| 33 | 2020.02.29  张云放 | von Kistowski, Jóakim & Grohmann, Johannes & Schmitt, Norbert & Kounev, Samuel. (2019). Predicting Server Power Consumption from Standard Rating Results. 10.1145/3297663.3310298. （汇报） |
| 34 | 2020.02.29  欧祉辛 | Wang Z, O'Boyle M. 2018. Machine Learning in Compiler Optimization. Proceedings of the IEEE. 106(11), pp. 1879-1901  （汇报） |
| 35 | 2020.02.29  欧祉辛 | Marco VS, Taylor B, Wang Z, Elkhatib Y. 2020. Optimizing Deep Learning Inference on Embedded Systems Through Adaptive Model Selection. ACM Transactions on Embedded Computing Systems. 19(1) （阅读） |
| 36 | 2020.02.29  齐新新 | Zhang, Huazhe & Hoffmann, Henry. (2019). PoDD: power-capping dependent distributed applications. 1-23. 10.1145/3295500.3356174.（汇报） |
| 37 | 2020.02.29  齐新新 | Imes, Connor & Zhang, Huazhe & Zhao, Kevin & Hoffmann, Henry. (2019). CoPPer: Soft Real-Time Application Performance Using Hardware Power Capping. 31-41. 10.1109/ICAC.2019.00015. （阅读） |
| 38 | 2020.02.09  孙晓乐 | Peng Y , Bao Y , Chen Y , et al. Optimus: An Efficient Dynamic Resource Scheduler for Deep Learning Clusters[J]. 2018.（汇报） |
| 39 | 2020.03.07  齐新新 | 1. Wang, Shu & Li, Chi & Hoffmann, Henry & Lu, Shan & Sentosa, William & Kistijantoro, Achmad Imam. (2018). Understanding and Auto-Adjusting Performance-Sensitive Configurations. ACM SIGPLAN Notices. 53. 154-168. 10.1145/3296957.3173206. 2. Imes C , Hofmeyr S , Hoffmann H . [ACM Press the 47th International Conference - Eugene, OR, USA (2018.08.13-2018.08.16)] Proceedings of the 47th International Conference on Parallel Processing, - ICPP 2018 - Energy-efficient Application Resource Scheduling using Machine Learning Classifiers[C]// 2018:1-11.（汇报） |
| 40 | 2020.03.07  严小明 | 1. HyPar-Flow: Exploiting MPI and Keras for Scalable Hybrid-Parallel DNN Training with TensorFlow.（汇报） |
| 41 | 2020.03.07  欧祉辛 | 1. Wang Z, O'Boyle M. 2018. Machine Learning in Compiler Optimization. Proceedings of the IEEE. 106(11), pp. 1879-1901（汇报） 2. Rocha RCO, Petoumenos P, Wang Z, Cole M, Leather H. 2019. Function Merging by Sequence Alignment. 2019 IEEE/ACM International Symposium on Code Generation and Optimization (CGO) Proceedings of the 2019 IEEE/ACM International Symposium on Code Generation and Optimization (CGO) IEEE, pp. 149-163 |
| 42 | 2020.03.07  孙晓乐 | 1. Reza, Md Farhadur & Ampadu, Paul. (2019). Energy-Efficient and High-Performance NoC Architecture and Mapping Solution for Deep Neural Network. 10.1145/3313231.3352377. 2. Charles S , Patil C A , Ogras U Y , et al. [IEEE 2018 Twelfth IEEE/ACM International Symposium on Networks-on-Chip (NOCS) - Torino, Italy (2018.10.4-2018.10.5)] 2018 Twelfth IEEE/ACM International Symposium on Networks-on-Chip (NOCS) - Exploration of Memory and Cluster Modes in Directory-Based Many-Core CMPs[C]// 2018:1-8. |
| 43 | 2020.03.07  张云放 | 1. MICRO-2012-A-Accurate Fine-Grained Processor Power Proxies. 2. Cluster Comput-2008-Power capping: a prelude to power shifting. 3. WEED-2012-Processor-Memory Power Shifting for Multi-Core Systems. |
| 44 | 2020.03.07  孙雨阳 | Estimation of energy consumption in machine learning. |