
Electrical & Computer Engineering
S E M I N A R
Louisiana State University

**Achieving Better Resource Scheduling
through Enhanced OS and ML Technologies**

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Abstract—To improve resource utilization and meet the new challenges—microservices—in cloud environments, this talk will include the results from our Sys-Inventor lab in recent years. The contents include 1) the technical evolutions for memory partitioning approaches; 2) hybrid memory management in OS for systems using NVM-DRAM; and 3) Next Generation OS – leveraging ML to build resource scheduler for microservices. Some of our results benefit both the computer industry and academia.

Bio—Lei Liu is an Associate Professor of Computer Science at Institute of Computing Technology (ICT), Chinese Academy of Sciences (CAS), where he leads the Sys-Inventor Lab, which is a part of the State Key Lab of Computer Architecture. He was a visiting scholar in CS at the University of Rochester (UR). He has led research projects that have advanced Memory Systems, OS, Performance Isolation, and Profiling. As the leading author, Dr. Liu has published research articles regarding the architecture and operating system in venues that include ISCA, PACT, IEEE TC, TPDS, ACM TACO, ICCD, and others. Recently, his work has focused on the intersection of the hybrid memory system (DRAM-NVM), OS for emerging technologies (including GPU, Graph, Quantum Computing as well as AI). Lei Liu has served as the PC/ERC members, Chairs for a number of mainstream conferences (e.g., HPCA, SC, PACT, ICS, IISWC, ISCA, ASPLOS, ICCD, ICPP, IPDPS, HPCC, General co-Chair for ACM ICS-2018) and reviewer for well-known Transactions (e.g., ACM TACO, ACM JETC, ACM TECS, ACM TRTS, IEEE TPDS).

When: Tuesday, 10 December 2019, 10:00 - 11:00

Where: Room 3285 Patrick F. Taylor Hall

Info: <https://www.lsu.edu/eng/ece/seminar>

