# ECE5658: Operating Systems Design – Paper Critique

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**이성우**

### 1. An Analysis of Linux Scalability to Many Cores, OSDI 2010

- This paper shows the analysis of the scalability of the MOSBENCH applications. The applications have scalability problems. Moreover. they fix and repair those problems in kernel level and application level. They said and showed that small modifications can increase the scalability level. I think this paper shows diverse characteristics of scalability problems in application and kernel level. However, the 48 core is not anymore called manycore system currently. I want to see these features in the systems with more cores.

### 2. The Scalable Commutativity Rule: Designing Scalable Software for Multicore Processors, SOSP 2013

- This paper defines the scalability features as the SIM commutativity and provide Commuter. They help developers and programmers and provide interface to analyze the scalability. These introduces the rule: Whenever interface operations commute, they can be implemented in a way that scales. Moreover, the Commuter tool they introduced provides high-level interface to developers. They show the scalability for system call pairs and their scheme sv6 shows higher scalability. This paper shows the critical rules for scalability that can help many developers.