CSCE 614: HW4 REPORT (SRRIP)

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*Abstract*—Write about the replacement techniques you are using in this report in short.

# **Introduction**

A short descriptions of each of the replacement policies and their references. Also compare the pros and cons of each of the techniques.

# **SRRIP technique**

## Short description of SRRIP technique

## Implementation details

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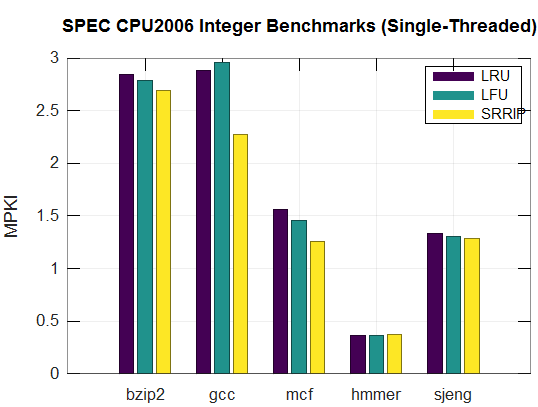
CSCE 614, HW-4 Report, Date: 10/30/2018

# **Methodology**

Write the simulation methodology and configurations considered for the experiments.

# **Evaluation**

In the evaluation section you have to compare the replacement techniques quantitatively. First produce the results. You have to compare three things about the program execution.

1. Number of cycles
2. IPC
3. MPKI

Draw graph (bar chart) for each of these for all the benchmarks across the techniques. Y-axis must be these parameters (#cycles, IPC, MPKI, etc.), and X-axis must be the benchmarks. For each of the benchmarks there should be “replacement technique” number of bars.

Q. How to calculate number of cycles?

*total\_cycles = cycles + cCycles*

For multi-threaded simulations (PARSEC) you have to add across all the processors (westmere-0 to westmere-7). The same thing is valid for all the calculations.

Q. How to calculate IPC?

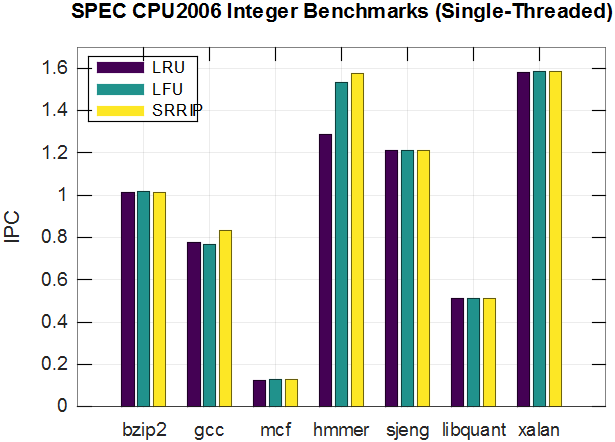
*IPC = #total\_instruction / #total\_cycles*

Q. How to calculate MPKI for L3?

t*otal\_misses = mGETS + mGETXIM + mGETXSM*

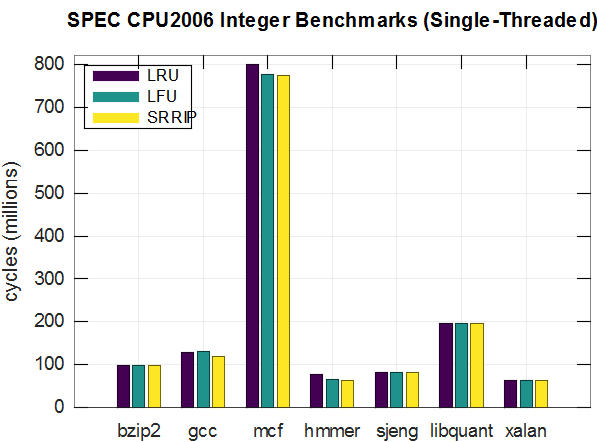
*MPKI = (#total\_misses / #total\_instruction) \* 1000*

L3 is configured as shared and distributed across multiple cores. So you have sum them up for getting the total number of misses, for multi-threaded workloads (PARSEC).

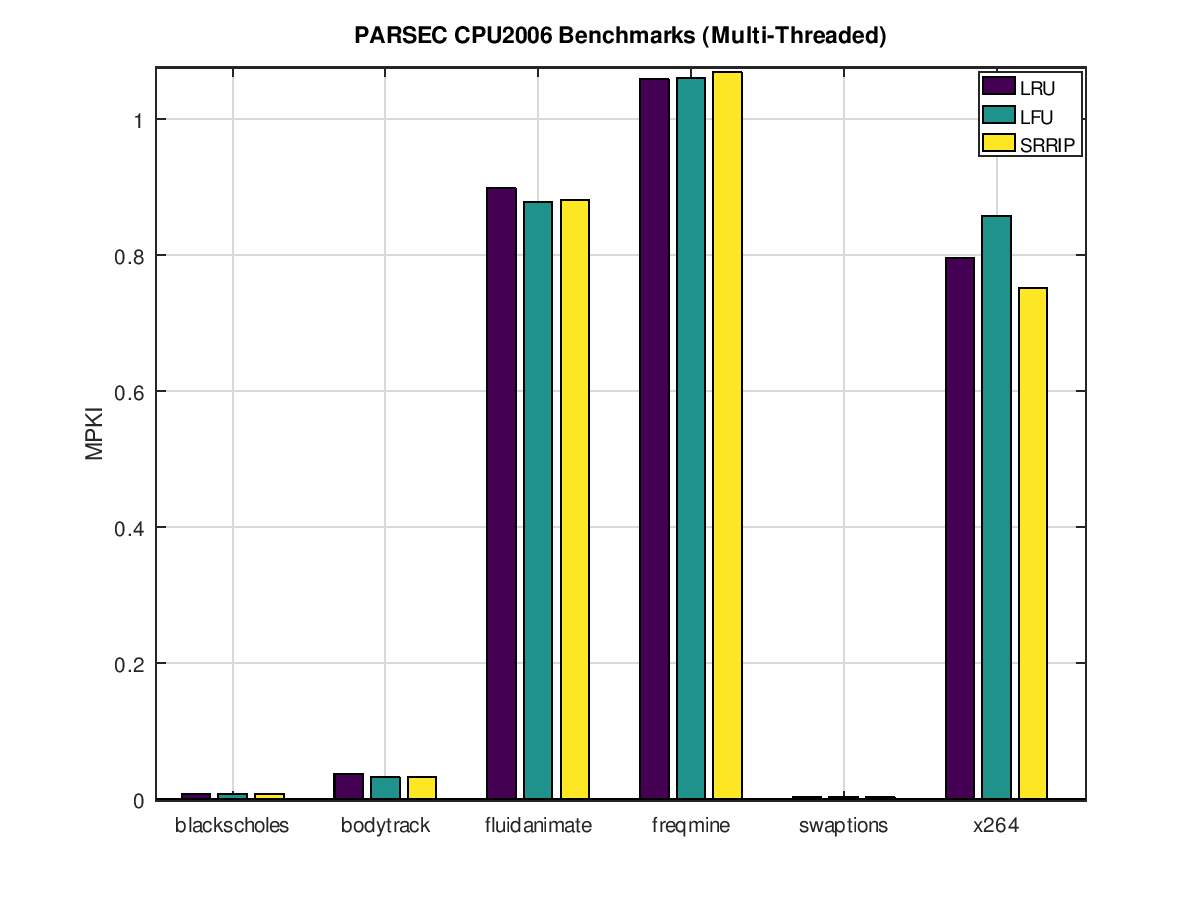


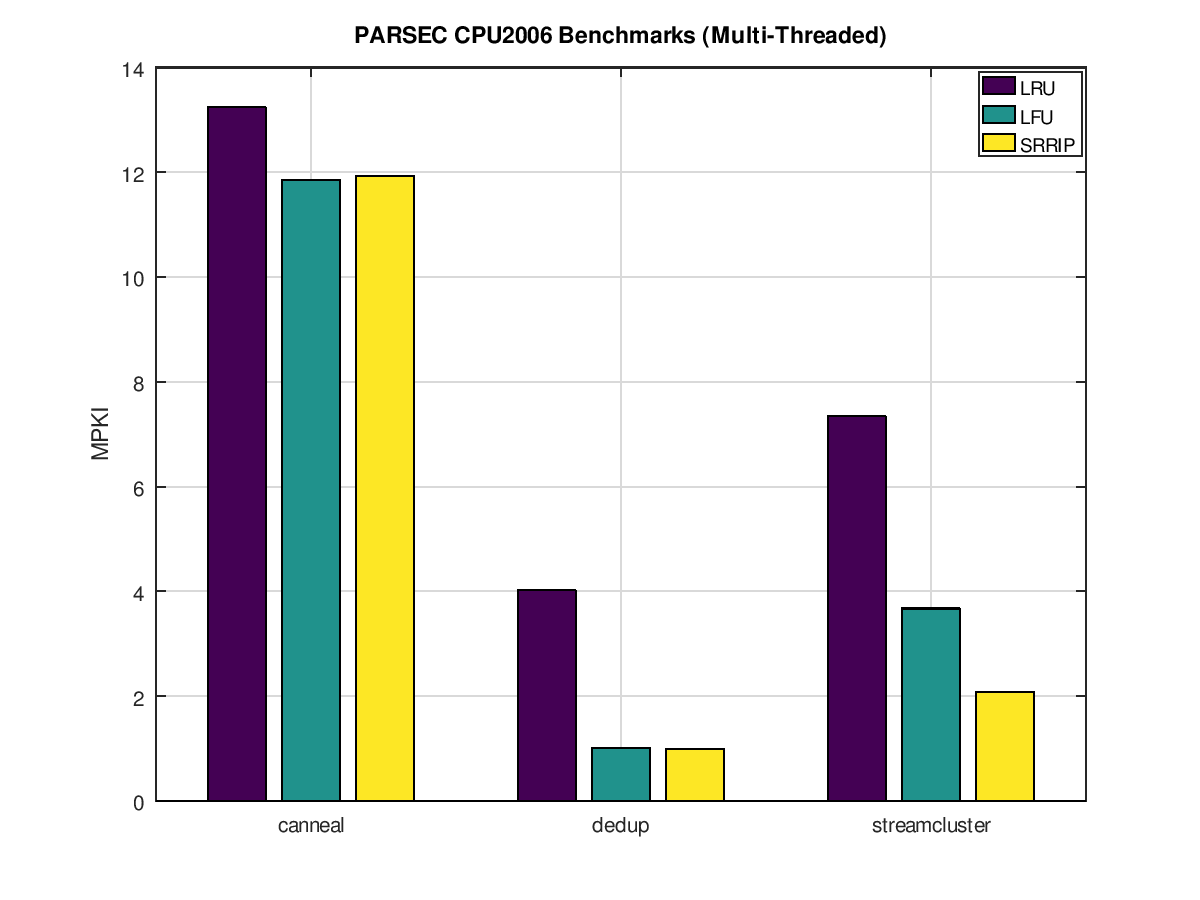
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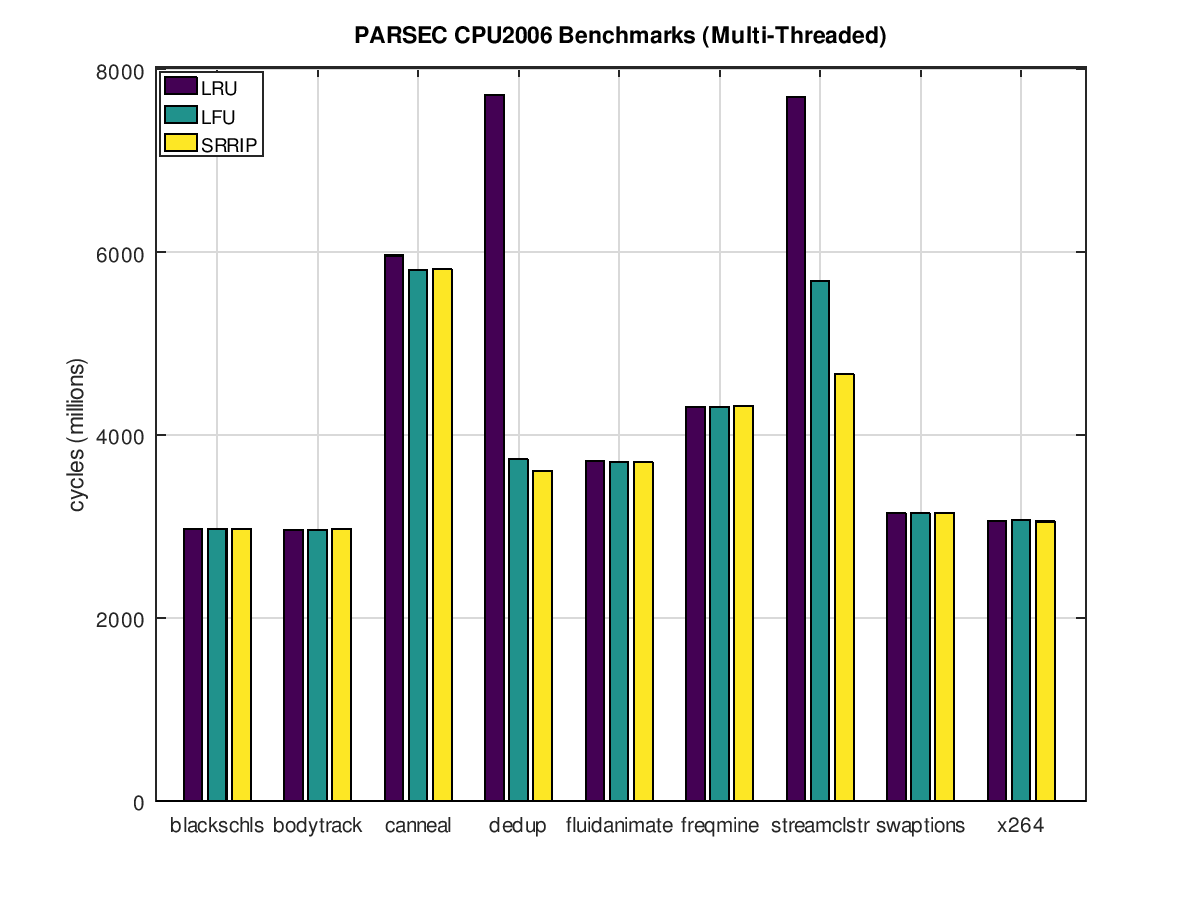
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##### **Acknowledgment**

Write about the discussions you have done with your friends (mention names), and also acknowledge their contributions. Also remember it is individual project, where you are allowed to discuss the concepts, but NOT allowed to share your implementations.

##### **Conclusions**

Your conclusion about the techniques.

##### **References**

The template will number citations consecutively within brackets [1]. The sentence punctuation follows the bracket [2]. Refer simply to the reference number, as in [3]—do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] was the first …

1. G. Eason, B. Noble, and I. N. Sneddon, “On certain integrals of Lipschitz-Hankel type involving products of Bessel functions,” Phil. Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955. *(references)*
2. J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.

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