Workshop on 1st JILP Data Prefetching Championship

http://www.jilp.org/dpc/

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Results Summary
Performance Score Calculation

• Three Configurations
  – Big L2 cache (2MB), unlimited bandwidth
  – Big L2 cache, limited bandwidth (max one L2 request every 10 cycles)
  – Small L2 cache (512KB), limited bandwidth

• Performance score:
  – Get speedup over no prefetching for selected SPEC2006 traces
  – Compute Geometric mean for speedups (over no pref) for each configuration
  – Score = sum of Geometric means across three configs

• Reference points:
  – No pref score = 3.0
  – Simple stride-based pref score = 3.27
(Anonymous) Results Summary
# Top Three Prefetchers

<table>
<thead>
<tr>
<th>Rank</th>
<th>Score</th>
<th>Config1 G. Mean</th>
<th>Config2 G. Mean</th>
<th>Config3 G. Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.437</td>
<td>1.468</td>
<td>1.471</td>
<td>1.498</td>
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<tr>
<td>2</td>
<td>4.335</td>
<td>1.487</td>
<td>1.438</td>
<td>1.410</td>
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<td>3</td>
<td>4.332</td>
<td><strong>1.509</strong></td>
<td>1.406</td>
<td>1.417</td>
</tr>
</tbody>
</table>
Awards

• PC Selection for Best Paper
  – L. Ramos, J. Briz, P. Ibáñez, V. Viñals (University of Zaragoza, Spain)

• 3rd Place
  – L. Ramos, J. Briz, P. Ibáñez, V. Viñals (University of Zaragoza, Spain)

• 2nd Place
  – M. Dimitrov, H. Zhou (University of Central Florida, USA)

• Champion
  – Y. Ishii (NEC Corporation), M. Inaba, K. Hiraki (The University of Tokyo, Japan)
Results Summary

Performance Score vs Paper #

- Paper #18c: 3.2
- Paper #20b: 3.4
- Paper #20a: 3.6
- Paper #25: 3.8
- Paper #18b: 4.0
- Paper #18a: 4.2
- Paper #16a: 4.4
- Paper #22: 4.6
- Paper #24: 4.6
- Paper #19a: 4.8
- Paper #19b: 4.8
- Paper #19a: 4.8
- Paper #21b: 4.8
- Paper #17: 4.8
- Paper #15: 4.8
- Paper #16b: 4.8
- Paper #21a: 4.8
- Paper #14: 4.8