

Performance of the VAX-11/780 translation buffer: simulation and measurement

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ACM Transactions on Computer Systems (TOCS), Volume 3, Issue 1 • Pages 31 - 62
<https://doi.org/10.1145/214451.214455>

Published: 01 February 1985 [Publication History](#)



146 1,984



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Abstract

A virtual-address translation buffer (TB) is a hardware cache of recently used virtual-to-physical address mappings. The authors present the results of a set of measurements and simulations of translation buffer performance in the VAX-11/780. Two different

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misses. Additional hardware measurements were made with and without the TB disabled.

Trace-driven simulations of several programs were also run; the traces captured

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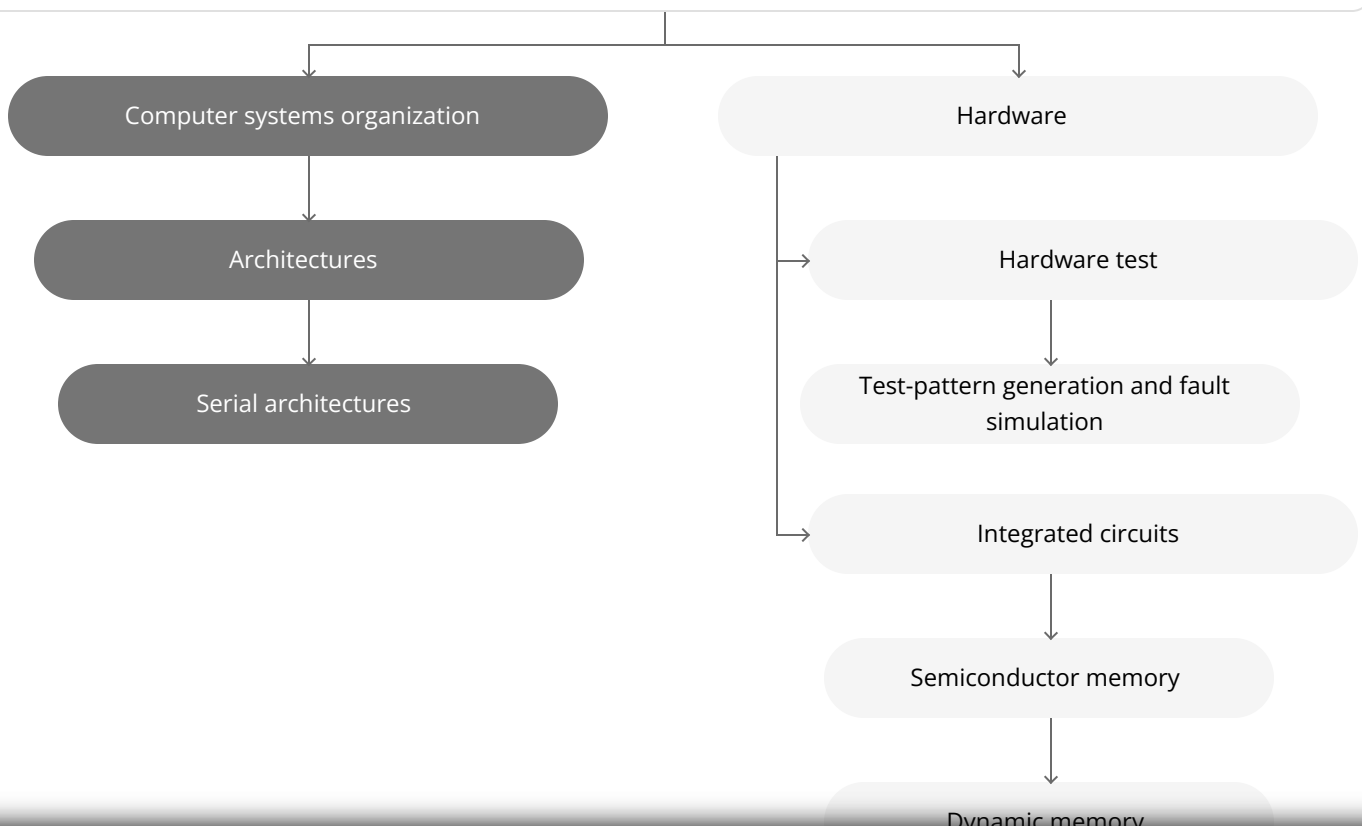
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Nine solutions to the cache consistency problem for shared-memory multiprocessors with multiple translation-lookaside buffers (TLBs) are described. A TLB's function is defined, and it is shown how TLB inconsistency arises in uniprocessor an...

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