

CACHE DESIGN STRATEGIES FOR EFFICIENT ADAPTIVE LINE PLACEMENT

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This dissertation aims to analyze some of the problems commonly found in modern caches and to propose cost-effective solutions to improve cache performance in many different environments. Most of the approaches proposed in this thesis take advantage of the different levels of demand experienced by cache sets, in order to reduce cache miss rates. Throughout this process we used a simple and cost-effective metric to track the state of each cache set, called Set Saturation



Level. It is worthwhile pointing out that our approaches are very competitive and often outperform many of the most recent techniques in the field, despite implying small storage and power consumption overheads.
