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DATA LEVEL PARALLELISM

in vector SIMD, and GPU architectures.

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Simon Cray1, cray2 ... xcray3.

a set of applications have significant DLP, not only matrix oriented applications in scientific computing.

media oriented image and sound processing, machine learning algorithms

SIMD is potentially more energy efficient compared to MIMD. biggest advantage of SIMD vs MIMD is that the programmer continues to think sequentially and achieve parallel speedup.

SIMD systems is attractive for PMDs also servers.

ECS for web server.

3 variations of SIMD in present

- vector architecture
- multimedia SIMD inst. set extensions,
- graphics processing unit. CUDA

120/000 PF

CACM JUN 2016.

vector architectures are easier to understand and to compile it to, than other SIMD variations.

x86 architecture has the same and consecutively

MMX vs SSE

SSE1 and SSE2.