

Embedded Vision Rechnerarchitekturen

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Following the end of Dennard scaling, processor architecture design has observed a couple of fundamental changes. While the first transition to multi- and many-core has already been carried out to its main extent, one can observe that the energy consumption of data movements in comparison to computational operators is meantime a prime concern. The implications are manifold, but we will see the prime concern is about locality, as energy consumption is dominated by physical communication distance. As a result, we start to observe a transition to communication-centric architectures, which, however, has substantial implications on certain application requirements, such as structure and predictability. In this talk, we will review the most important implications and sketch out possible future venues of computer architecture.