

# Parallel Computer Architectures and their implications on Programming and Compilation

*Draft*

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## **Abstract**

We classify different types of parallel machines according to the memory organization and the address-space model supported. After describing the implicit and explicit parallelism in Fortran programs we address revealing features of parallel Fortran dialects. We illustrate the compilation process of a program written in parallel Fortran for different types of MIMD machines. We discuss the run-time support necessary for the implementation of data distribution directives, intrinsic functions, and explicitly parallel constructs in a portable manner on different platforms.

## **Document**

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