

EEE4084F Lecture 5: Parallel Architectures

Class Activity



Step 1: choose an application

Consider an application:

1. Transaction processing
2. Face recognition
3. 3D graphics rendering
4. Pattern search (or string search)
5. Radar
6. Database queries

Step 2: which programming model would you like to use?

Consider the types of programming models:

- Sequential / non-parallel
- Data parallel model
- Message passing model
- Shared memory model
- Hybrid models

TODO: Work in groups. Follow steps 1-3 shown for a selection of the applications listed in step 1.

Types of architecture models

SISD Single Instruction Single Data	SIMD Single Instruction Multiple Data
MISD Multiple Instructions Single Data	MIMD Multiple Instructions Multiple Data

Step 3: which computer architecture would you use?