

# Tips to use MATLAB parallel computing toolbox

Kai Du

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*Parallel computing toolbox enables researchers to harness a multicore computer, GPU, cluster and even cloud to solve computationally and data-intensive problems.*

However, there are some options to use it (e.g. *parfeval*, *parfor* and even *spmd*), such as

```
n = 100; parfor (or parfeval) i = 1:n output(i)=Function(input(i))  
end
```

As MATLAB suggested, *parfor* and *parfeval* usually perform better than *spmd* for a set of tasks under these conditions:

- ▶ The computational time taken per task is not deterministic.
- ▶ The computational time taken per task is not uniform.
- ▶ The data returned from each task is small.

Use *parfeval* when:

- ▶ You want to run computations in the background.
- ▶ Each task is dependent on other tasks.

In this post, I share my experience to use these three commands. The general rule is the tradeoff between the time to deploy the