Directions For Parallel Programming Languages?

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Questions?

What is a parallel programming language (PPL)?
What are the applications?
What are appropriate goals?
What are the metrics for these goals?
What are the constraints upon evolution of PPLs?
What are the established trends?
What basic concepts under research in PPLs?
Directions For Parallel Programming Languages?

What is a parallel programming language (PPL)?

Can PPLs be characterized and organized into a taxonomy? Is MPI a parallel programming language?

What are appropriate goals?

Minimize time to solution?

What are the metrics for these goals?

What is “solution?”
Directions For Parallel Programming Languages?

What are the established trends?

Increasing abstraction
Components and composition
Increasing domain focus
Integration of distributed and parallel programming

What basic concepts underlie research in PPLs?

Who is doing research in PPLs?

Definition of abstractions
Composition from components