

Unified Parallel C

Rakhi Anand

Department of Computer Science
University of Houston
rakhi@cs.uh.edu



References

- Slides in this lecture are based upon following references:
- <http://upc.lbl.gov/lang-overview.shtml>
- <http://upc.gwu.edu/downloads/Manual-1.2.pdf>
- <http://upc.lbl.gov/docs/user/index.shtml>
- <http://upc.gwu.edu/tutorials/UPC-SC05.pdf>



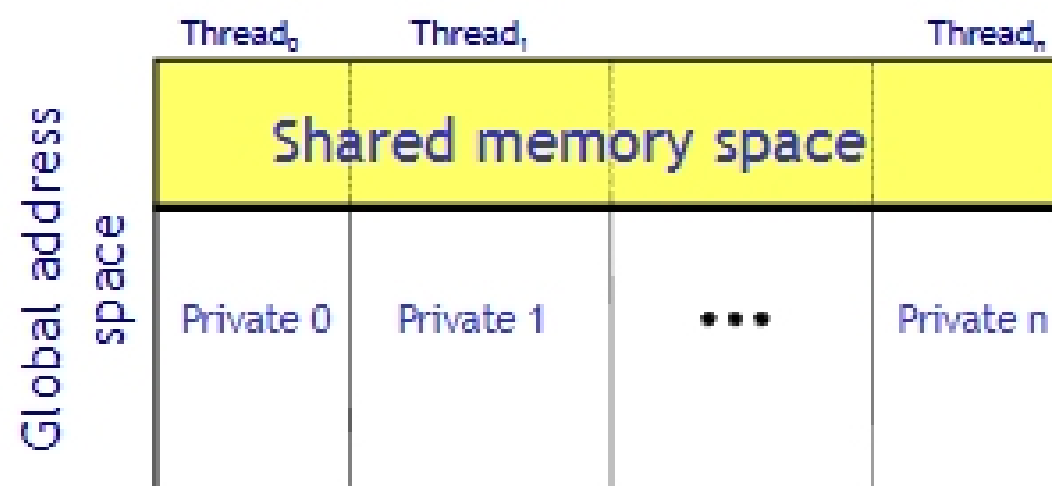
Introduction

- Unified Parallel C
- A Partition Global Address Space language (PGAS) model
- Similar to C language
 - Common and familiar syntax
- Designed for parallel C programs
- Provide the ability to exploit data locality in different memory architectures



PGAS Languages

- UPC is based on Partition Global Address Space language (PGAS) model.



UPC Execution model

- A number of threads work in SPMD fashion
 - MYTHREAD gives thread index(0, 1.....n-1)
 - THREADS gives number of threads



UPC Execution model

- There are two compilation mode
 - Static Threads modes
 - Threads are specified at compile time
 - Using THREADS constant
 - Dynamic Thread mode
 - Threads are specified at run time

