

Bibliography

- [1] Message Passing Interface Forum. MPI: A Message Passing Interface. Technical report, University of Tennessee, June 1995.

Appendix A

An overview of MPI

This appendix gives a brief overview of the MPI functions referred to in the thesis. For a full description see [1].

MPI_Barrier Performs a barrier synchronisation amongst a group of processes.

MPI_Bcast Broadcasts data from the root node to all processes in the group.

MPI_Reduce Reduces a set of data items held on separate processes down to a single value on the root process. The operation for the reduction can be summation, minimum/maximum, or provided as a function by the programmer.

MPI_Allreduce As reduce, but the answer is returned to all processes rather than just the root.

MPI_Scatter Scatters data from the root process to all processes in the group.

MPI_Gather Gathers data from all processes to the root process.

MPI_Allgather Gathers data from all processes to all processes.

MPI_Alltoall Each process sends and receives distinct data to/from every other process in the group.

MPI_Send Sends a message from one process to another.

MPI_Recv Receives a message from another process.

MPI_Wtime Returns the current local timer value, in seconds.

MPI_Wtick Returns the resolution of MPI_Wtime.

MPI_Comm_split Partitions a group of processes into a set of smaller groups.