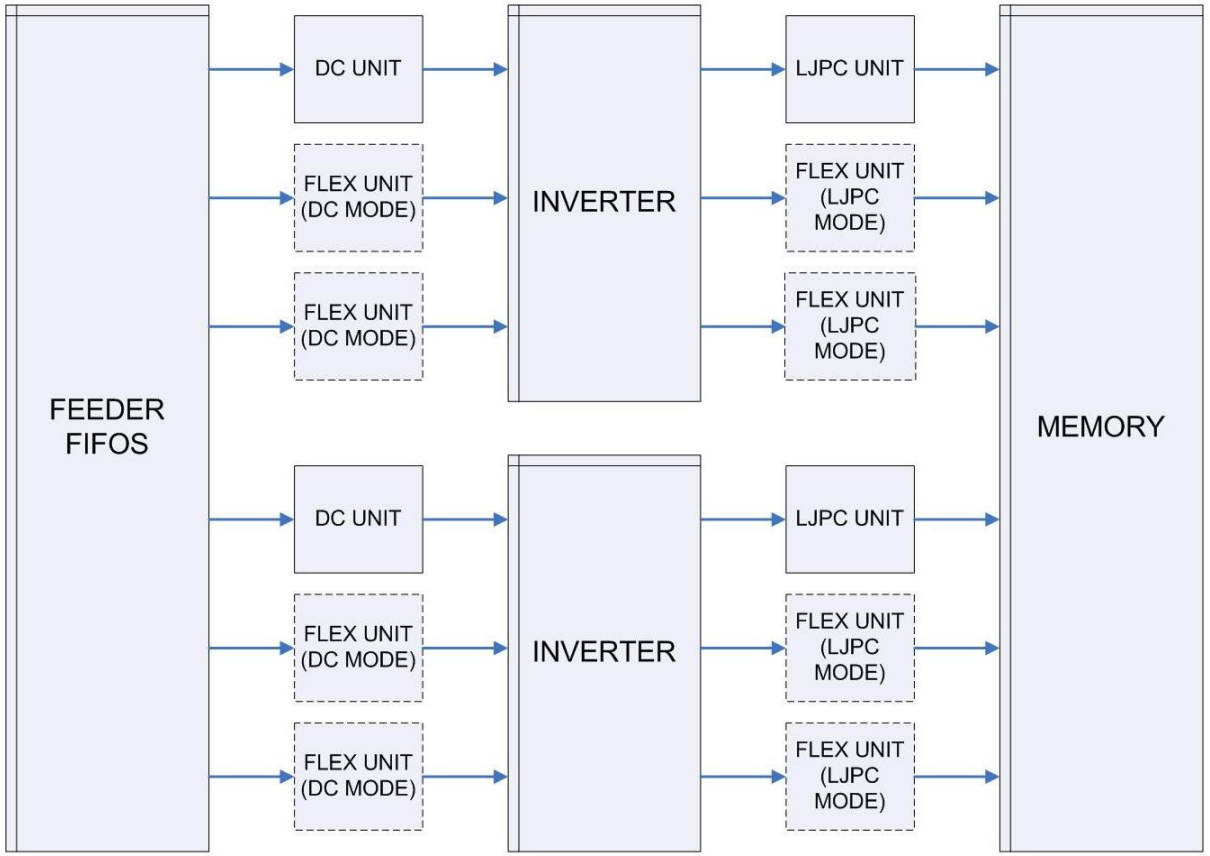
An FPGA-Based Dynamic Load-Balancing Architecture for Solving N-body Problems



- Novel high-performance architecture for performing molecular dynamics computations
- Dynamic load balancing on the FPGA allows for increased computational throughput
- FLEX processors can operate in different modes to increase resource utilization

Results

- System calculates Lennard-Jones potential between atom pairs
- FLEX processors can perform either distance calculations or L-J potential calculations