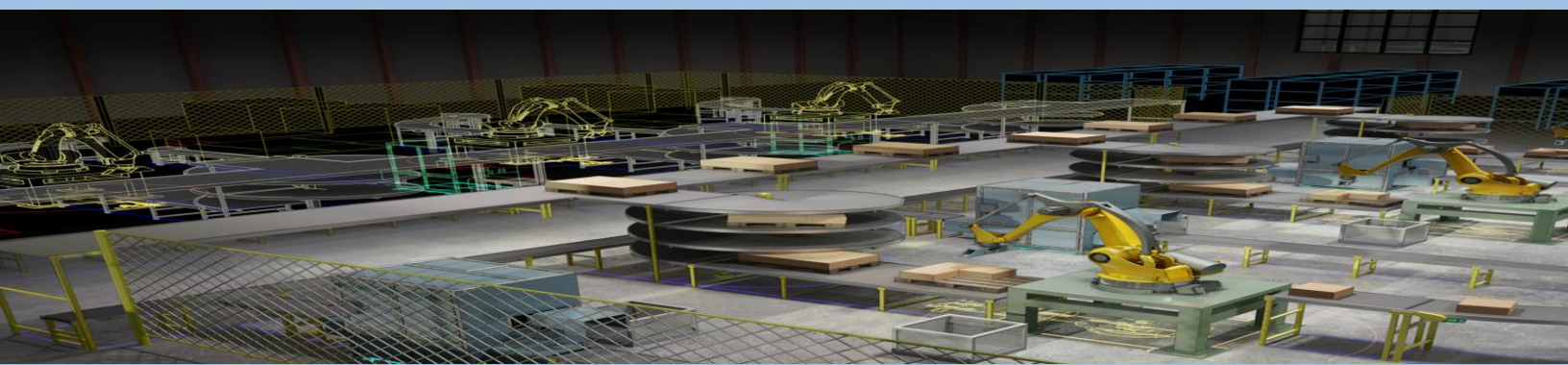
MANUFACTURING SYSTEM SIMULATOR

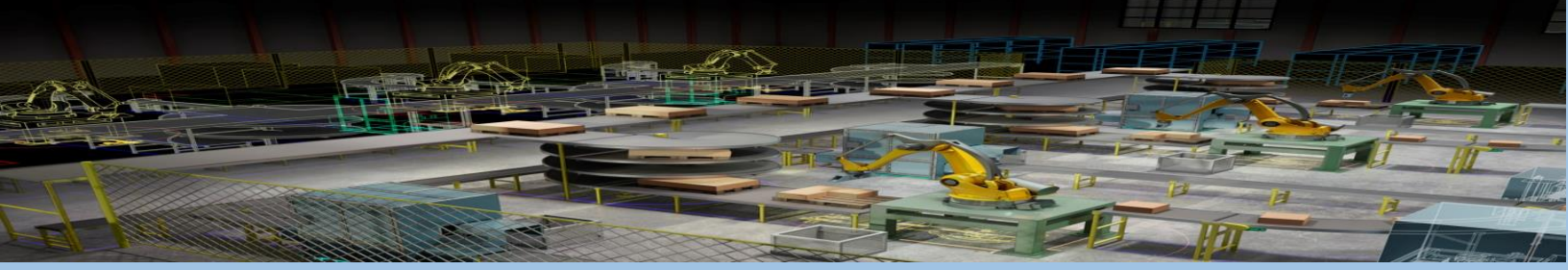
Developed By:

Department of Mechanical Engineering

National Institute of Technology Calicut

Calicut – 673601, Kerala



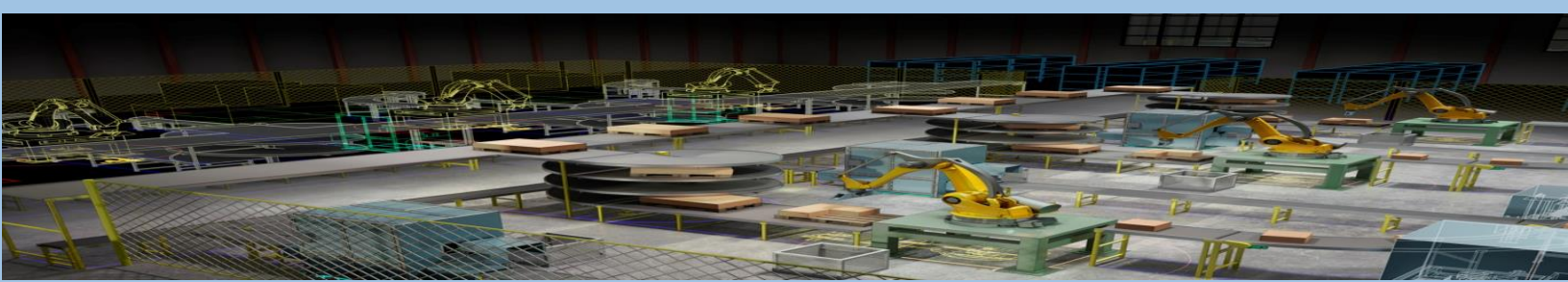


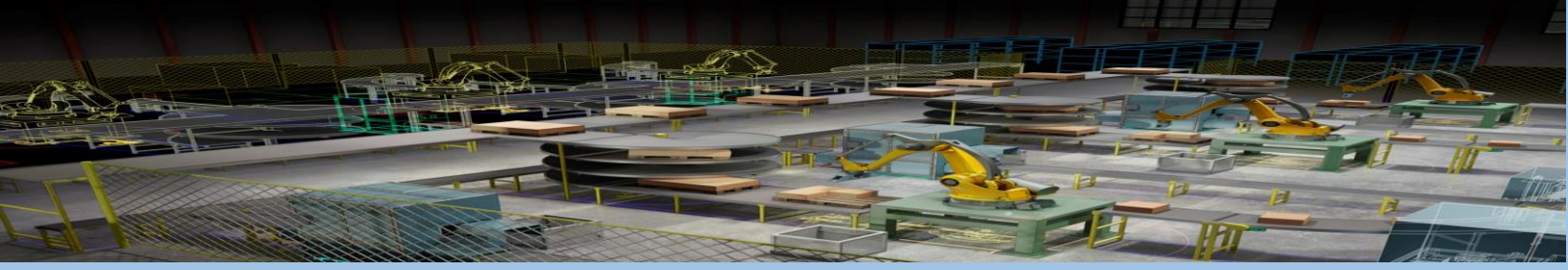
About the Manufacturing System Simulator

- Simulate the performance of a manufacturing system.
- Annual demand, layout configuration, process plan are required for evaluating the performance of the manufacturing system.
- Dynamic and static demand environments are considered.
- The layout designs that can be used for evaluation under static demand are Process layout and cellular layout.
- The layout designs that can be used for evaluation under dynamic demand are Process layout, adaptive cellular layout and robust cellular layout.
- The operation conditions considered in this package are:
  Scheduling rules:-

  (i) First-Come-First-Serve (FCFS)
  (ii) Shortest Processing Time (SPT)

- Levels of setup reduction possible in cellular systems compared to process layout.
  (i) Speed of material handling system
  (ii) Transfer batch sizes
  (iii) Shop loading
- Performance measures considered are:
  (i) Throughput
  (ii) Manufacturing lead time (flow time)
  (iii) Queue length
  (iv) Utilisation
  (v) Work-in-process inventory





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