

DISTRIBUTED AND PARALLEL SIMULATION, METHODS AND SOFTWARE SYSTEM

Summary - The paper is concerned with simulation experiments carried out on a network of machines or parallel machines. Distributed simulation is proposed as an alternative to traditional sequential simulation which allows to reduce the execution time of a simulation program. The important issues associated with the implementation of parallel and distributed simulation are discussed. Different simulation techniques, including conservative and optimistic protocols for calculation process synchronization are reviewed. Particular attention is paid to the effectiveness of the proposed mechanisms. The paper describes a software system ASim/Java, a Java-based library that enables to do parallel and distributed simulations. The practical examples are provided to illustrate the operation of the presented software tool.