

Introduction to Wait-Free Computing

Michel Raynal

Informally, "wait-free" means that the progress of a process depends only on itself. This notion is more and more pervasive in a lot of problems that basically rely (in one way or another) on the definition and the use of concurrent objects in presence of failures. This lecture will visit wait-free computing: its underlying concepts and its basic mechanisms. To that end, the lecture will also visit fundamental problems of asynchronous computing in presence of failures; such as renaming, set agreement, snapshot, etc.