THE P VERSUS NP PROBLEM:
A MEMBRANE COMPUTING PERSPECTIVE

The **P** versus **NP** problem is one of the outstanding open questions in science. This question belongs to the seven *Millenium Prize Problems* stated by the Clay Mathematics Institute of Cambridge, Massachusetts, USA, on May 24, 2000 (some of the most difficult problems with which mathematicians were grappling at the turn of the second millennium, with one million allocated to the solution of each problem). The relevance of this problem is not only the inherent pleasure of solving a mathematical problem, since an answer to it would provide information of high economical interest.

In this talk, a new methodology to tackle the **P** versus **NP** problem is given by using the paradigm of Membrane Computing. The methodology will be presented in a sistematic way and different frontiers between efficiency and non-efficiency are shown in terms of syntactical ingredients of cell-like and tissue like membrane systems. Each of them provides a new way to address the **P** versus **NP** problem within the framework of this bioinspired and unconventional computing **paradigm**.