

Seminars on PhD research activities: "On the Design and Development of a Quantitative-Qualitative Methodology for Modeling Physical-Biological Systems: Partial and Blind Models"

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Time: Thursday, June 23, 15:00PM

Location: Room A1.4 (Coppito, Blocco 0)

Title: On the Design and Development of a Quantitative-Qualitative Methodology for Modeling Physical-Biological Systems: Partial and Blind Models

Abstract: Since its "foundation," computational intelligence has been creating novel-high perspectives on modeling, on the other hand, the "old-fashioned" mathematics offers powerful methods that should not be forgotten or underestimated. On this talk, it is discussed methodology proposed by the authors on the mathematical modeling, with emphasis in biomedical and biological modeling. The methodology comprises of an attempt to use simultaneously mathematics and computational intelligence in a single picture, using the concept of blindness of a model for generalization. The methodology proposed can be summarized into the name of "the middle-way-out principle," concept already taken in a systems biology in a qualitative manner. The theory is presented and discussed. It is done a parallel between the theory and the current research of the authors. This talk can be interesting to anyone working or planning to work with modeling in biology and medicine, nonetheless, it is of opinion that this kind of complexity in modeling is not peculiar from medical and biological sciences. The talk is concluded with some conclusions and final remarks, the main references used all over the work are presented in the end. Further, the talk is organized in a "brainstorm"-like style, idea sharing for discussions and enrichment.

The talk is part of a series of seminars given by PhD students on ICT of our University, presenting their ongoing research activities in the respective area. The goal of the seminars is to provide an overview on ongoing research activities, highlight common interests and explore emerging possibilities for collaboration between different research areas.