

CURRICULUM STUDIORUM

Giuditta Franco

Giuditta Franco graduated in Mathematics at the University of Pisa, and earned her PhD in Computer Science, with a dissertation titled *Biomolecular Computing — Combinatorial Algorithms and Laboratory Experiments*, at University of Verona, where she is currently an associate professor. Her research interests place across discrete mathematics and theoretical computer science, with focus on computational models of biological systems and biomolecular computing, namely Membrane and DNA computing. Her work involved informational analysis of DNA sequences and dynamical modelling, by means of membrane systems, of immunological processes and of cellular tissue healing. Furthermore, she advanced an analytical and experimental (in molecular biology laboratories) study of biomolecular algorithms, which gave as results *i*) novel methods of DNA extraction and recombination, *ii*) discovery of informational and computational principles characterizing DNA molecular structure, *iii*) fresh theoretical models for the generation of DNA tridimensional structures through the well known process of self-assembly. She spent several periods abroad, in the United States, at the University of South Florida and at the SUNY "Binghamton University", and in Holland, at Leiden Institute of Advanced Computer Science. She gave talks in several international workshops and she is co-author of scientific papers published by prestigious international journals (Mathematical Biosciences, TCS, Natural Computing, Biosystems, The Journal of Logic and Algebraic Programming). She was an effective member of both the European Molecular Computing Consortium (EMCC) and the International Society for Nanoscale Science, Computing and Engineering (ISNSCE), and she is a reviewer for several international journals, included AMS ones.