Dr. Terpsichori Alexiou completed her PhD studies at the Department of Chemical Engineering at the University of Patras in 2012. Her doctoral research involved the development of multiscale theoretical models, and the computational simulation (FEM) of the interaction between a Newtonian fluid and a permeable, poro-elastic cellular biological medium (e.g., microbial biofilm, mammalian tissue) in channels and in porous media. During her studies, she collected several awards, most notably an excellent paper award, administered by the American Academy of Sciences for a paper presented to the International Conference on Environmental Science and Technology at Houston, Texas, 2007. She is the author of 7 papers, all involving aspects of computational biomechanics and fluid-biomaterial interactions at any level of observation (biopolymer, biological cell, tissue). In the last few years, she had the opportunity to expand her modelling capabilities by implementing discrete modelling techniques, such as molecular dynamics and dissipative particle dynamics, for the study of biological systems, like DNA. Throughout the past two years, she has obtained significant experience with high performance computing, being most actively involved in computationally intensive MD simulations of DNA minicircles, as an active user of national HPC systems available to the scientific community via the Greek Research & Technology Network (GRNET) in the National HPC facility – ARIS.