

Ηράκλειο 24 Οκτωβρίου 2022

ΠΑΡΟΥΣΙΑΣΗ ΔΙΠΛΩΜΑΤΙΚΗΣ ΕΡΓΑΣΙΑΣ

Της φοιτήτριας Αγγελίνας Καραμεσούτη, θα γίνει τη

Πέμπτη 03/11/2022 και ώρα **12:00**

στην αίθουσα συνεδριάσεων Ε102 του κτηρίου Μαθηματικών και
Εφαρμοσμένων Μαθηματικών

τα μέλη της διμελούς επιτροπής: κ. Μητράκη Άννα (επιβλέπουσα)
και

κ. Βαμβακάκη Μαρία

Θέμα Διπλωματικής:

«Study of self-assembled peptides and their Copper-binding complexes»

Abstract:

Natural biomolecules, like peptides and proteins, are building blocks of natural biomaterials due to their ability to self-assemble through intermolecular interactions, forming various micro- and nanoscale structures such as fibrils and hydrogels. Hydrogels are three-dimensional, crosslinked hydrophilic networks of natural or synthetic polymers, which have the ability to store large amounts of water or other biological fluids. In this diploma thesis, the self-assembly of the copper-binding tripeptides GGH (Glycine-Glycine-Histidine) and GHK (Glycine-Histidine-Lysine) was examined, using a variety of solvents under a range of conditions. Additionally, peptide mixtures were studied in order to examine the interactions between them, as well as their propensity for co-assembly. Finally, as the imidazole ring of histidine can be coordinated to a variety of divalent metal ions, we conducted experiments with copper ions (Cu^{2+}) in order to study the impact of histidine-metal coordination on the self-assembly process of the peptides.