ABSTRACT:

The Bachelor Thesis presents basic principles of the environmental magnetic methods and their applications in paleoenvironmental reconstructions from Quaternary sedimentary archives. Description of mineral and rock magnetic principles follows after an introductory sketch of historical development of the environmental magnetic topic. Next part of the thesis is focused on explanation of basic principles of the environmental magnetic methods and application magnetic history of the sedimentary rocks: namely different kinds of magnetic susceptibility, anisotropy of magnetic susceptibility, remanent magnetization and hysteretic parameters of the sediments. Application of the environmental magnetic methods enables interpretation of depositional and/or post-depositional history (e.g., directions of wind or water currents transporting clastic sediments) or intensity of geochemical weathering (connected with pedogenesis) which is directly controlled by climatic conditions and their changes. Examples of application of the environmental magnetic methods in paleoenvironmental research of the deep ocean, lacustrine and eolian natural archives are described in the final part of the thesis.

Key words: environmental magnetism, paleoenvironmental reconstruction, sedimentary archives, Quaternary