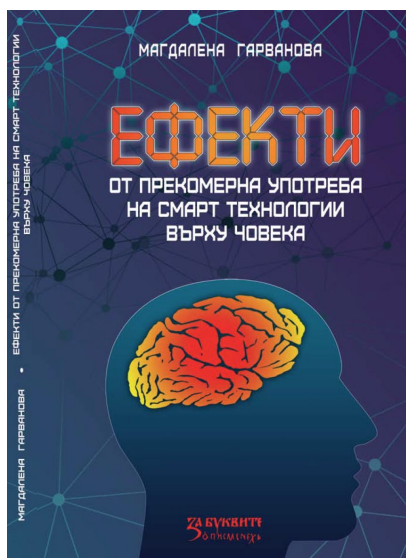


Effects of Excessive Use of Smart Technologies on Human: Data Processing from Empirical and Experimental Research Author: *Magdalena Garvanova*



The monograph “Effects of excessive use of smart technologies on human: Data processing from empirical and experimental research” examines current issues of modern society, caused by the new trends in information and communication technologies. They are in it presented some psychological aspects of Internet addiction the bridge, as well as studies of internet addiction in young also students. To explain the effects of excessive use of smart technologies on humans, in the monographic labor the electromagnetic fields generated by smart technologies in various work environments, including in electric cars.

A series of experimental and field studies are conducted, as a result of which heterogeneous data were collected from thermal cameras, electroencephalograms, empirical data, etc., processed by various statistical methods, such as t-tests, ANOVA, correlation and regression analysis, etc., and estimates of the impact of smart technologies on man have been obtained. Also shown is a model of absorption of electromagnetic fields by humans, and more specifically, absorption in the head region. Some effects observed in the human brain caused by prolonged use of smartphones are described. An analysis of the

measures applicable in the prevention of the risk of exposure to electromagnetic fields has been made.

They make a very good impression of the correct application of different statistical methods and criteria for processing heterogeneous data, the use of the SPSS program and MATLAB as processing and calculation environments, as well as the in-depth analysis of the obtained scientific results. Assoc. Dr. Magdalena's knowledge and skills are impressive Garvanova to process and analyze heterogeneous data, as well as its ability to present and promote in the most convincing way the results obtained. The monograph is a complete research work, richly illustrated with 111 figures and 18 tables. The questionnaire of the study is attached, as well as the algorithm for creating a computer model for studying the absorption process of electromagnetic fields from the human head.

The author of the monograph, Magdalena Garvanova, is an associate professor at UniBIT since 2016 and teaches disciplines such as “Statistical Data Processing”, “Data Science”, “Processing Big Data Sets”, etc. in bachelor's and master's programs. There are over 200 scientific publications in Bulgarian, Russian and English, some of which are dedicated to the various techniques and methods for processing data from experimental and empirical studies.

Thanks to its active research activity, it has proven to be an established scientist and researcher, and the non-accidentally peer-reviewed monograph “Effects of Excessive Use of Smart Technologies on Human” is an in-depth study on several topically related issues concerning internet addiction and electromagnetic fields generated by smart technologies, as well as their impact on humans. In addition to the presented experimental data and results of the conducted research, the monograph contains mathematical application models used to simulate electromagnetic field absorption by a human head using the COMSOL Multiphysics software product.

The monograph is written in accessible language and can be useful not only for academic readers and students but and for a wider readership interested in the impact of new smart technologies on the human organism.

*Prof. Daniela Borissova, D.Sc.
Institute of Information and Communication Technologies
at the Bulgarian Academy of Sciences*