

## OPINION

on dissertation work for obtaining  
educational and scientific degree "Doctor"

Author of the dissertation: **Milvina Todorova Terzieva**

Title of the dissertation: **Integration and synergy between information and communication technologies and modern banking**

Doctoral program: **Computer systems, complexes and networks**

Professional field **5.3. Communication and computer technology**

Member of scientific jury: **Prof. DSc Eng. Ivan Stoyanov Yatchev**

### **1. Relevance of the problem developed in the dissertation**

The topic of the dissertation work is in the area of application of information and communication technologies in banking. Bearing in mind the particular specificity and importance of the level of ICT in banking, it can be said that the dissertation work is dedicated to the solution of an actual problem. The continuous increase in the level of ICT in banking is important both for the banks themselves and for their customers.

### **2. Degree of knowledge of the state of the art of the problem**

The author has demonstrated a very good knowledge of the problem. A bibliographic reference of 108 sources is presented, of which 102 are in English and 6 in Bulgarian.

The aim of the dissertation work is to achieve synergy between innovative methods and means of digitalization in the banking environment through the integration of ICT in modern banking. For its implementation, 4 tasks have been posed and solved.

It can be considered that appropriate approaches corresponding to the modern development of ICT have been selected and implemented for the solution of the tasks.

### **3. Scientific-applied contributions of the dissertation work**

Main scientific-applied contributions:

- A new approach has been created to integrate modern financial and information and communication technologies in order to create a new financial service.

- A new real-time banking service has been synthesized with three main components: physical customer, electronic customer and customer service. The service is based on information banking technologies and applies modern web communication standards.

- An improvement of the new service has been developed with modern information and communication technologies, in which the space user profile technology has been integrated, providing convenience, personalized experience and speed of service for the customer, while maintaining the security and protection of the user's personal data.

### **4. Evaluation of publications on the dissertation work**

8 publications have been made on the dissertation work - one in a journal in Bulgaria, one in a proceedings of international conference abroad and 6 at international conferences in Bulgaria. 4 of the publications are in English and 4 in Bulgarian. Two publications are with the PhD candidate being the only author, the rest are co-authored with the scientific supervisor, and in 5 of them the author of the dissertation is in first place.

The minimum national requirements, those of PURPNSZAD of the BAS and the specific conditions of IICT are met, and for the indicators on group Γ there is a significant (more than 3 times) exceeding of the required minimum of 30 points.

### **5. Critical remarks and recommendations**

The dissertation is well presented. The practical applicability of the obtained results should also be noted. I have no substantive critical remarks. Implementation of the results in the banking system can be recommended.



## CONCLUSION

Taking into account the results and contributions obtained in the dissertation, as well as the quantity and quality of the publications to it, I give a **positive assessment** of the dissertation and strongly suggest that **Milvina Todorova Terzieva** be awarded the educational and scientific degree "Doctor" in the field of higher education 5. Technical sciences, professional field 5.3. Communication and computer technology, doctoral program "Computer systems, complexes and networks".

**Date: 19 Feb 2024**

**MEMBER OF THE**

НА ОСНОВАНИЕ

331А