STATEMENT

on a PhD thesis for the acquisition of educational and scientific
degree "PhD"

Author of the PhD thesis: Nektarios Moumoutzis
Topic of the PhD thesis: Operational Conceptual Modeling in Building and Sustaining Virtual Communities
in professional field: 4.6 Informatics and Computer Science, PhD program: Informatics, for the needs of the Bulgarian Academy of Sciences (BAS) - Institute of Mathematics and Informatics (IMI)
Reviewer: Prof. Krassen Stefanov Stefanov, Information Technology, Faculty of Mathematics and Informatics, Sofia University "St. Kliment Ohridski"

According to the Order № 208/20.07.2022 г. of the Director of the Institute of Mathematics and Informatics at BAS (IMI-BAS) I was appointed to be a member of the scientific jury for the defense of PhD dissertation in Higher education field 4. Nature sciences, Mthematics and Informatics, professional field: 4.6 Informatics and Computer Science, PhD program: Informatics, of Nekarios Moumoutzis, with scientific leader prof. Radoslav Pavlov.

This statement is prepared in accordance with the requirements of the ZRASRB, Statute of MC for the application of ZRASRB, Statute for the development of the academic staff of BAS, and Statute of IMI-BAS.

1. **Relevance of the problem developed in the dissertation in scientific and scientific-applied terms. Degree of knowledge of the state of the problem and creative interpretation of the literary material.**

The goal of this thesis is to provide a comprehensive approach for supporting Onlife Communities by employing digital technologies within a framework to support learning in communities.

It aims to achieve this by supporting ICT experts aiming to offer innovative technologies to establish and sustain Onlife Communities with an approach that allows them to involve users to cocreate the technologies they use, and to support the needs of members of Onlife Communities of Practice and Learning taking into account the need to facilitate their gradual development from beginner to expert in parallel with the evolution of the communities themselves.

2. **Correspondence of the chosen research methodology and the set goal and tasks of the dissertation with the achieved contributions.**

Dissertation includes 164 pages containing the main text, figures, tables, literature with 108 titles and several appendixes. The main text is structures into Introduction, 5 Chapters and Conclusion,

with list of publications and main contributions. The list of publications proposed from the candidate in direct relation with the dissertation includes 16 titles, all of them with at least two co-authors, but in all publications the candidate is the first author.

The dissertation is well structured and includes relevant figures and tables. The text is logical, with enough details and well balanced. The literature includes many titles and show good knowledge of the candidate of the domain of dissertation.

3. Scientific, scientific-applied contributions of the dissertation. Significance of contributions to science and practice.

Contributions as proposed by the candidate can be formulated in the following way:

(1) Studies and practically oriented analyses of key concepts and actual principles of the modern digital technologies promoting creativity and learning within rich social contexts and focusing on current developments in computer supported collaborative work and participatory design:

- study of the design with specific links between computer systems and theatre in order to help users to learn by manipulating the digital representations or

artefacts;

- analysis of the concept of universality and its relation to causality and how it is promoted by digital technologies.

(2) Development of PerFECt, a Performative Framework to Establish and Sustain Onlife Communities based on a conceptual framework, incorporating models and specific guidelines for using digital systems to empower communities, and addressing specific learning and creativity domains.

(3) Development and enhancement of the eShadow tools in order to establish and sustain communities in digital cultural heritage.

(4) Development and enhancement of ViSTPro, a spatio-temporal process visualization platform that enables rich learning experiences in diverse domains including cultural heritage in general and history learning in particular.

(5) Development and enhancement of Coursevo, a community building, distance training and learning platform that facilitates the building and support of communities of practice and communities of learning.

(6) Applied practical implementation and experimentation with the proposed community building structures and services to assess the view and evaluate experiences of members of the studied communities.

4. Evaluation of the PhD thesis publications.

The main results from the dissertation are described in 16 publications in English language. All publications have at least three authors, and the candidate is the firs author in all the publications. One of these publications is in the scientific journal, and the rest are puvlished in the international conference proceedings, most of them with impact factor or impact rang.

There are several citations of these publications to the current moment, but I missed to find any specific information provided by the candidate. The small number of citations can be easily explained having in mind that the were made in the last 1-2-3 years.

The candidate has a lot of citations in his other publications prior to the dissertation.

There is no doubt that the candidate is the real author in his publications as he is first author in all his publications.

5. Autoreferat, opinions, recommendations and remarks.

The Autoreferat is in accordance with all the requirements of different statutes mentioned above and fully represents the content of the dissertation.

I have no objections or remarks on the PhD thesis.

I strongly recommend to the candidate to focus his next research publications to more prestigious journals with higher impact rank and higher impact factor.

6. Conclusion with a clear positive or negative assessment of the PhD thesis.

The presented work fully qualifies by its content, quality of scientific results and contributions as a PhD Thesis. It contains scientific and applied results representing original contributions to the science. That is why I give positive mark and assessment of the PhD Thesis.

The presented work fully complies with the requirements for obtaining an educational and scientific degree of PhD, according to the "Law on the Development of Academic Staff in the Republic of Bulgaria" and the regulations of IMI-BAS. I recommend to the scientific jury to award Nektarios Moumoutzis with the educational and scientific degree "PhD" in professional area 4.6. Informatics and Computer Science, PhD program: Informatics.

Date: **Member of the scientific jury:**
25.09.2022   **/Krassen Stefanov/**