S T A T E M E N T

by **Professor Evgeniy Hristov Krastev**, PhD, from **Sofia University St. Kliment Ohridsky**
in the competition for the scientific position of **"Associate Professor"**
at New Bulgarian University,
Scientific Field: **4. Natural Sciences, Mathematics and Informatics,**
Professional Field:**4.6. Informatics and Computer Science**
announced in **"Darzhaven vestnik" No 95/16.11.2021**
Candidate: **Assistant Professor Rossitza Ivanova Goleva**

The statement is prepared in my capacity as a member of a scientific jury on the competition
for the academic position "Associate Professor" under the Professional Field (PF) 4.6
"Informatics and Computer Science", according to order No. 3-RC-94/06.014.2022 of the
Rector of the New Bulgarian University (NBU) and on the basis of a decision No.
04/21.12.2021 of the Academic council of NBU
A single candidate, Assistant Professor Dr. Rositsa Ivanova Goleva from the NBU, has
submitted documents for participation in the competition. Dr. Goleva has more than 25 years
experience as a lecturer in the field of information and communication technologies. From
1987 to 2017 she has been Assistant Professor at the Technical University of Sofia (TU),
afterwards she is appointed Assistant Professor in the Department of Informatics of NBU,
where she conducts research and teaching activities in the field of information and
communication technologies.

I. Fulfillment of the minimal national requirements and the requirements of the New Bulgarian University

I became acquainted with the materials and scientific papers presented in the competition and
examined the written evidence provided by the candidate in connection with Art. 56(2) of the
Ordinance on the Development of the Academic Staff of NBU (NRAS NBU) for the holding
of the academic position Associate Professor I have established that Dr. Goleva satisfies the
following requirements:

- Holds an educational and scientific degree "Doctor" in the field of information
  technologies (TUS-FTK78-H1-037/ 20.07.2016) acquired at TU-Sofia after defending
  a dissertation entitled "Assessment of patterns for shaping traffic in IP networks". The
  title and scope of this dissertation is in the field of the specialty of the competition.
- She has held the academic position of Chief Assistant significantly more than the
  required minimum of two years
- She has provided tangible evidence that the minimum number of points required for
  all groups of indicators for acquiring the academic position of Associate Professor is
  satisfied and the scores of points go well beyond these requirements in certain
  positions. For example, she has presented eight publications in specialized scientific
  editions, equivalent to monographic work, which are evaluated at 156 points of 100
  points required. In relation to indicator group Г, the candidate produced evidence
  estimated at more than 261 points instead of the required minimum of 200 points by
  submitting 6 publications and 2 chapters of books, each of which is indexed in Scopus
  and web of Science. The points are calculated by taking into account a correction
  factor of 3 valid for area 4.6.
- The publications submitted are not used for other procedures
- There is no legally established plagiarism in her scientific papers

This gives me reason to conclude that the documents submitted in the competition by Dr. Goleva are fully compliant with both the requirements of the Law on Development of Academic Staff in the Republic of Bulgaria (ZRASRB) and the Regulation for its implementation, as well as the requirements of NRAS NBU. In particular, the group of documents in the competition (6 Self-Assessment of the Candidate) reflects these facts correctly, in detail and comprehensively.

II. Research activities
1. Assessment of publications equivalent to monographic work
For participation in the competition, Dr. Goleva described the publications equivalent to a monograph under numbers [B4.1- B4.8], where all of then are indexed in Scopus, Web of Science or other world-renowned databases of scientific information. Two of them [B4.1, B4.2] have SJR without IF. In four of these publications, Dr. Goleva is the first author and in the others participates with no more than 5 co-authors. The publications were made in the period 2014-2017. The major contributions in these publications are related to applying Internet of Things technologies in creating systems that allow people to improve their lifestyle and interaction with the environment. Some of the most significant contributions in this area include analysis and design of a platform architecture for improving lifestyle, as well as the development of tests and scenarios for the application of individual functionalities by means of such a platform. The platform architecture uses an open hierarchical model that allows the well- known OSI reference model adaptation to complex network communications requirements in the problem area under consideration. An analysis of the basic requirements for lifestyle improvement systems [B4.4] (scientific contributions) has been carried out. The platform proposed in these publications is presented at an abstract level in terms of finding solutions to real-time data exchange problems between sensors [B4.1] or in selected use cases [B4.5,B4.8]. A separate five-layer software hierarchy is introduced at the root of the network hierarchy. Examples of essential functional requirements for this platform at the network communications level have been analyzed. (scientific and applied contributions).

2. Evaluation of contributions to other attached publications
Dr. Goleva has submitted additionally six publications (Г7.1- Г7.6) and two chapters of books (Г8.1- Г8.2) in relation respectively to indicators Г7 and Г8 of the minimum requirements of ZRASRB. They were made in the period 2016-2019. The publications Г 7.1- Г 7.6 have SJR, they are indexed in Scopus and Web of Science, and two of them have high impact factor. All the eight publications are with co-authors, whereby Dr. Goleva is the first author in one of them. The scientific results in these publications are in relation to the research presented in publications [B4.1- B4.8]. The results obtained are scientifically applied contributions in the field of information and communication technologies. In particular, they fall in the scope of analysis of network robustness and quality of service, development of platforms for Internet of Things network service applications, traffic analysis and definition of new services and functions in similar systems, analysis of architectural solutions, compatibility of protocols. Computer experiments effectively confirm the theoretical results in publications [B4.1- B4.8].

3. Citation by other authors
The reference for citations of the publications submitted for the competition lists 20 citations visible in Scopus and the Web of Science. These citations shall be estimated at 160 points after applying an appropriate corrective factor. This is conclusive evidence of the importance of the results of the research of the Dr. Goleva.

4. Evaluation of the results of participation in research and creative projects and application of the results obtained in practice.

Dr. Goleva has provided evidence for her participation in four national and three international scientific and educational projects. Between 2013- 2017 she has been vice-president of the international project COST Action IC1303, Algorithms, Architectures and Platforms for Enhanced Living Environments (AAPEL), funded by the European Commission. These projects are directly related to her research activities, reported in the publications submitted for participation in this competition.

III. Teaching activities

Dr. Goleva teaches three courses in the bachelor's program of "Network Technologies" (in English) at NBU. She has developed her own teaching materials in Moodle in support for these courses. She has delivered several public lectures abroad under the Erasmus program. She has translated from English a book on network technologies. A report is presented, which shows her involvement as scientific supervisor of graduates, participation in commissions for the defending of thesis. I appreciate positively her work with the students.

IV. Administrative and community activities

Dr. Goleva is actively involved in the administrative and social activities at NBU. She regularly participates in departmental council meetings, she is coordinator for Moodle training at her department, participates in library trainings, participates in the Program board of the Department of Telecommunications and the Department of Informatics. Dr. Goleva helps in developing and improving the teaching program in network technologies of the department, as well as to continuously update the educational material and enrich the teaching tools. Her responsibilities include processing applications of new M.Sc. students.

V. Personal comments

I know Dr. Goleva for more than 10 years. She is a respected and dedicated lecturer at NBU. I have immediate positive impressions of her as an active member in the leadership of IEEE Bulgaria as well.

VI. Critical remarks

Most of the publications for participation in this competition were made before 2018, while in recent years the concepts for network architectures such as software-defined networks (SDN) and network functions virtualization (NFV) have become widespread in practice. At the same time, the OSI model used in most of these publications has retained importance merely in theoretical point of view. On the other hand, creating a common automated ambient open platform for enhanced living environment is a rather complex task in general, even when examining individual aspects and their interconnection within such a platform. The meaning of "enhanced living environment" allows quite free and different interpretations. Without a specific analysis of the business processes in the context of these interpretations, it is too difficult to define essential functional and non-functional requirements for this platform. The functional compatibility of the proposed platform with existing platforms and external systems deserves more in-depth research significantly beyond the field of network communications. Therefore, I recommend that the candidate continue her research activities taking into account the novelties in the virtualization of network resources, the full range of

functional requirements and relevant limitations in the application of such a platform for a selected application area or the finding of innovative solutions to socially significant tasks. It is also recommended that the candidate in the competition prepares and publishes educational tools in connection with the courses she teaches at NBU.

Conclusion

On the basis of the above arguments, I **strongly recommend** to the Honorable Scientific Jury to propose to the Academic Council at NBU to **elect Dr. Rositsa Ivanova Goleva to the academic position "Associate Professor"** in professional field 4.6. Informatics and Computer Science. Her appointment to the academic position "Associate Professor" will be a well-deserved recognition for her professional achievements and academic responsibilities, as well as a strong incentive for the development of her research activity and the high stimulus for her further academic realization as a lecturer at NBU.

I give a **positive** assessment of her application in this competition.

Sofia, 31.03.2022   Signature …………….

                                                    /Professor Evgeniy Krastev, PhD/