

REVIEW

of the application package submitted for the academic position of "Professor" in the professional field: **"5.3 Communication and Computer Engineering"**, course **"Administration of Local and Internet Networks"**, according to a competition published in State Gazette issue No. 29 of 31.03.2023,

with the candidate: **Assoc. Prof. Hristo Georgiev Valchanov, PhD**

Reviewer: **Prof. Todor Dimitrov Ganchev, PhD.**

1. General and biographical data

The competition for the academic position (AP) "Professor" in the academic discipline **"Administration of Local and Internet Networks"** announced on the proposal of the Department of **Computer Science and Engineering (CSE)** and approved by a decision of the Faculty Council of the Faculty of **Computer Engineering and Automation (FCEA)** was promulgated in State Gazette issue No. 29 of 31.03.2023 and on the website of the Technical University of Varna (TU-Varna). Assoc. Prof. Hristo Georgiev Valchanov is the only candidate who has submitted an application for participation within the statutory deadline and was subsequently admitted to the competition.

In short, Hristo Valchanov graduated from the **Higher Institute of Mechanical and Electrotechnical Engineering – Varna** (currently the Technical University of Varna) in 1989 and qualified as an "Electronics and Automation Engineer" from the **Department of Computer Engineering** of FCEA. In 2008 he acquired a PhD degree at the Technical University of Varna in the professional field **"5.3. Communication and Computer Engineering"** in the scientific speciality **"Computer Systems, Complexes and Networks"** (Bulgarian national cypher 02.21.04).

The career development of Assoc. Prof. Valchanov covers a period of 33 years, during which he has consistently improved his qualification, performing teaching and research activities inextricably linked to the development of computer equipment and the means of administration of local and Internet networks. In short, in 1990, Hr. Valchanov joined the Department of Computing at the Technical University of Varna as an Assistant Professor, and in 1999 he was promoted to Chief Assistant Professor. In 2014, Dr H. Valchanov habilitated in the professional field **"5.3 Communication and Computer Equipment"** in the scientific speciality **"Computer Systems, Complexes and Networks"** and was appointed the AP "Associate Professor" at the Department of CSE.

In 2016, Assoc. Prof. Valchanov **was elected to the administrative position of Head of the CSE Department** for the term 2016-2020, and in 2020 he was re-elected to the same position for a second term (2020-2024). During this period, he gained considerable administrative experience and established himself as an indisputable authority, a leading specialist in computer networks and systems, and an outstanding organiser.

In summary, I can confidently confirm the existence of indisputable indications that Assoc. Prof. Valchanov, thanks to his qualities, high professionalism, and hard and purposeful work, has established himself as an experienced and reliable member of the team of the Department of CSE

who contributes significantly to the implementation of teaching, research and administrative activities and skillfully manages and coordinates the activities in the department team.

2. General description of the materials submitted

Assoc. Prof. Valchanov participates in the competition for the AP "Professor" with 70 scientific publications, including six as a sole author. Among these, a **group of 14 thematically grouped publications** developed in co-authorship fulfil the requirements under indicator **"B.4" as equivalent to habilitation work** -- indexed in the SCOPUS database, and the remaining **56 appear under the group of indicators "G"**. Specifically, among these 56 publications, a group of 22 are presented to meet the requirements of indicator "G.7" -- publications **that are referenced and indexed in world-famous databases of scientific information, and another** 34 papers grouped under the indicator "G.8" have been published in non-indexed proceedings with scientific peer review or edited collective volumes.

In accordance with the requirements of the Law on Occupying Academic Positions in the Republic of Bulgaria and the relevant Rules for its implementation, the applicant has submitted a reference of the publications on the fulfilment of the minimum national requirements for holding an AP "Associate Professor" (a total of 31 publications) and a list of a total of 6 publications submitted for acquiring the PhD degree. These groups of publications do not overlap.

To meet the minimum national requirements for the group of indicators of category "D", the applicant has submitted two lists **with a total of 108** citations, including **72 pcs under indicator "D.12"** -- citations in scientific editions, referenced and indexed in world-famous databases with scientific information or monographs and collective volumes and a **total of 36 pcs under indicator "D.13"** -- citations in monographs and collective volumes with peer review.

To meet the minimum national requirements for the group of indicators of category "E", Assoc. Prof. Valchanov has presented the following information:

- (i) "E.18 Participation in a national scientific or educational project" – a list of participations in **a total of 19 projects**, including 4 projects funded under the Operational Programs of the Republic of Bulgaria and another 15 projects funded by the Technical University of Varna;
- (ii) "E.19 Participation in an international scientific or educational project" – a list including **3 international projects**;
- (iii) "E.20 Management of a national scientific or educational project" – **leader of 1 project** funded by the TU-Varna.
- (iv) "E.22 Acquired funds for projects led by the applicant – 1 item for every BGN 5,000" – one project worth BGN 8,500.
- (v) "E.24 Published university teaching or teaching equipment that is used in the school network" – a list **of 20 teaching guides**, in one of which he is the author, and 19 are co-authored;

A formal comparison of the information provided by Assoc. Prof. Valchanov, with the minimum national and institutional requirements for the AP "Professor" in the groups of indicators for the scientific field **"5. Technical Sciences"** is shown in Table 1. As seen in the table, his

achievements **exceed** the minimum national and institutional requirements for the AP "Professor" in all groups of indicators.

Table 1: Reference for the application package provided by Assoc. Prof. Valchanov certifying the fulfilment of the minimum conditions for acquiring an AP "Professor".

Group of indicators	Criteria by indicators	Minimum national requirements for acquiring AP "Professor."	Points Assoc. Prof. Valchanov
A	Indicator 1	50	50
---	Indicator 2	---	---
B	Indicator 3 or 4	100	330
G	The sum of indicators from 5 to 11	200	640.3
D	The sum of indicators from 12 to 15	100	828
E	The sum of indicators from 16 to 28	150	471.8
Zh	Indicator 29	120	1500
	Aggregate by all indicators	720	3820.1

3. General characteristics of the applicant's research and applied activities

The comprehensive coverage of topics and the number of scientific publications of Assoc. Prof. Valchanov shows his multifaceted scientific production. Of the 70 publications presented in the competition, 36 are indexed in world-famous scientific literature databases. A current query in SCOPUS as of 10.07.2023 shows a total of 46 publications of the author. As of the same date, a check for the citations of his publications in SCOPUS shows 86 pcs with self-citations from all co-authors excluded and **SCOPUS h-index = 6**, which is above the average for TU-Varna.

Assoc. Prof. Valchanov has participated in a total of **22 scientific, applied research and educational projects**, including 3 funded by international funds, 4 funded under the operational programs of the Republic of Bulgaria and 15 funded by the Technical University of Varna with funds purposefully subsidised by the Bulgarian state budget in support of raising the level of scientific activity at universities.

Assoc. Prof. Valchanov provides a reference for seven international **business trips held in Poland, Ireland, the Czech Republic, and Hungary**, which indicates the candidate's activity in the search for international contacts.

4. Evaluation of the candidate's pedagogical training and activity

The pedagogical activity of Assoc. Prof. Valchanov covers over 33 years of experience at the Technical University of Varna. According to the information presented for the **previous 3 years, the applicant has been engaged in 1500 lecture hours in 9 disciplines** included in the curricula for the Bachelor's degree for students of the specialities "Computer Systems and Engineering (CSE)" and "Software and Internet Technologies (SIT)", as well as for students trained in the Master's degree

programmes. The presented information for the co-authorship of **20 teaching manuals** on the subject of the competition is an excellent attestation of the work of Assoc. Prof. Valchanov as a lecturer.

5. Scientific and applied research contributions

The candidate has provided a comprehensive reference to his contributions in the publication groups referred to indicators B.4, G.7 and G.8, which I accept. Four groups of applied research contributions and four groups of R&I have been formulated – most of these results were obtained during his involvement in research projects.

The 70 publications submitted in the competition reflect the candidate's significant scope of research and applied research activities. Based on the composition of the authors' teams of most of the publications, as well as my impressions of the work of Assoc. Prof. Valchanov has significantly contributed to the quality of the advances and results.

In summary, the contributions formulated by the candidate duly summarise the advances reported in the publications of Assoc. Prof. Valchanov. They can be attributed to the categories: proof by new means of existing theories and hypotheses and confirmatory data, creation of new methods and stands, and developed methodologies related to the advances of operating systems, local networks and Internet technologies.

6. Significance of contributions to science and practice

Regarding the importance of the contributions to the science and practice of the candidate, I can judge indirectly, based on the number of citations from independent authors and the number of projects in which he has participated as a researcher or supervisor:

- (1) A significant part of the candidate's RTD is the result of his work on research and educational projects -- a total of 22 projects;
- (2) A total of 86 citations in SCOPUS, mainly by foreign authors, which is an indicator that the works of Assoc. Prof. Valchanov has attracted the attention of foreign scientists working on similar topics.

7. Critical remarks and recommendations

I find documentation well-organized and convenient for fact-checking. I have no substantive remarks.

8. Personal impressions and opinion

I know Assoc. Prof. Valchanov since 2016, in his role as the Head of the Department of CSE. In the years after 2016, I gained a comprehensive view of the scope of his teaching, scientific and administrative activities as a colleague in the composition of the Department of CSE. In this regard, I can confirm that over the years, Assoc. Prof. Valchanov has proven his high working capacity, purposefulness, and professionalism in solving diverse engineering, teaching and organisational problems.

CONCLUSION

The application package submitted to the competition provides an opportunity for an objective and multifaceted assessment of the research and teaching achievements of Assoc. Prof. Valchanov. The formal comparison of the submitted documents with the national requirements and the Technical University of Varna rules for appointing AP "Professor" proves that the **minimum national and institutional requirements have been exceeded**.

After a careful acquaintance with the application package submitted to the competition and considering my impressions of the candidate's qualities, I confirm that **I support the candidate Assoc. Prof. Hristo Valchanov** in the competition for the academic position "Professor" in the professional field: 5.3 "Communication and Computer Equipment", academic discipline "Administration of local and Internet networks".

Date: 15.07.2023

REVIEWER: _____

/Prof. Todor Ganchev, PhD/