

REVIEW REPORT

**on Scientific Work for Participation in a Competition
for the Academic Position of Associate Professor in 5.3. 'Communication
and Computer Equipment' Professional Field
('Computer Networks and Internet' Academic Subject)
at the Department of 'Software and Internet Technologies'
with the Faculty of 'Computer Sciences and Automation',
announced in State Gazette Issue No. 65 of 06.08.2021
of Ch. Assist. Prof. eng. Rosen Stefanov Radkov, PhD
by Prof. Mihail Petkov Iliev, PhD, D.Eng. Sc**

1. Background and Biographical Information

One applicant participates in the competition for the academic position of Associate Professor, announced in the State Gazette, issue 65 of 06/08/2021 and on the website of the Technical University—Varna (TU-Varna) for the needs of the Department of 'Software and Internet Technologies' at the Faculty of 'Computer Sciences and Automation' - eng. Rosen Stefanov Radkov, PhD, Chief Asst. Professor at TU-Varna.

Rosen Stefanov Radkov was born in 1963. He obtained his Master's degree in Computer Sciences from TU-Varna in 1989. In 1990, upon a successful participation in a competition, he was selected for the Assistant Professor position at TU-Varna. In 2018, Rosen Radkov earned his doctoral degree in Computer Systems, Complexes and Networks. As of the date of writing the present review report, the applicant is employed as a Chief Assistant Professor at the Department of 'Software and Internet Technologies' with the Faculty of 'Computer Sciences and Automation'.

2. General Description of the Submitted Materials

The candidate participates in the present competition with 23 scientific publications, incl. 15 in Bulgarian and 8 in English, categorized as follows:

- A monograph titled 'Continuity of Information Security. Analysis and Management Approaches';
- 21 articles and scientific papers published in scientific journals and presented at scientific forums;
- A study guide—a handbook for laboratory exercises in 'Internet Servers and Services'.

The candidate's scientific publications are divided in 3 groups in compliance with the national requirements for the scientific and teaching activities of candidates for the academic position of Associate Professor in the 'Technical Sciences' field.

- Group B.3 - a monograph titled 'Continuity of Information Security. Analysis and Management Approaches';
- Group F.7 - 4 scientific publications referenced and indexed in the SCOPUS scientific information database (incl. 2 single-authored);
- Group F.8 - 17 scientific publications in non-refereed journals with scientific review or in edited collective volumes (incl. 13 single-authored).

3. General Characteristics of the Candidate's Scientific and Applied Research Activity

The candidate's publications are presented as follows:

- **4** at scientific forums with books of proceedings, refereed and indexed in the SCOPUS database (incl. **2** single-authored);
- **17** in non-refereed journals with scientific review or in edited collective volumes (incl. **13** single-authored).

With regard to the place of publishing, the publications in the non-refereed editions are divided as follows:

- **8** in journals published in Bulgaria;
- **6** in books of proceedings published in Bulgaria;
- **3** in books of proceedings published abroad.

The submitted scientific publications could be classified across the following thematic fields:

- design and assessment of data centers (DCs) reliability and quality—**11**;
- computer sciences—**4**;
- information security, personal data protection and information security management systems—**6**;

- online education—1.

The candidate had participated in **11** scientific research projects. The author's citation report submitted with the materials for the competition includes **15** known citations, incl. **6** in editions referenced and indexed in the SCOPUS database, with h-index of **2**.

4. Assessment of the Pedagogical Competence and Activity of the Candidate

Ch. Assist. Prof. Rosen Radkov, PhD has worked as a lecturer at TU-Varna since 1990. He has delivered courses and lectures both in English and in Bulgarian to students in the Bachelor's and Master's degree programmes in the following academic subjects: Computer Networks and Internet; Network Administration; Internet Servers and Services, as well as in Bulgarian in the following academic subjects: Reliability and Security of Communications; Security of Computer Networks; Reliability and Security of IT IS, Business Continuity; Computer Communications and Networks; Administration of Local and Internet Networks. Ch. Assist. Prof. Rosen Radkov, PhD has participated in the development of numerous curricula. While at TU-Varna he has supervised 65 graduates in the preparation and defence of their research/theses and has developed a review report for 35 diploma theses. In the last 3 years he has been a member of the National Examination Committee for Thesis Defense. Rosen Radkov has completed 2 Erasmus international mobility programs and has been a chair of the Student Scientific Session Committee. The candidate has authored one handbook. All in all, it can be concluded that the teaching work and pedagogical activities of Ch. Assist. Prof. Rosen Radkov's are diverse and meaningful.

5. Main Scientific and Applied Research Contributions

The main contributions of the candidate's scientific publications are in the following fields:

- **Design and assessment of the reliability and quality of data centers;**
- **Information security, personal data protection, and information security management systems;**
- **General scientific research.**

Essentially, I would classify his contributions as follows:

1. A proposal of a method of delivering high data center reliability defining the actions whose consecutive execution would guarantee an adequate solution [Γ.8.13].

2. A synthesis of a model of the environment defining the threats and their sources as well as their influence on the DC work [Γ.8.9].
3. A synthesis of a data center model for micro, small and medium business organizations defining its components, roles, services, characteristics and way of functioning, which are taken into consideration when designing reference IT infrastructures (ITIS) for DC [Γ.8.12].
4. A proposal and verification of an approach for choosing the optimal ITIS by which, based on the computational indicators of the reference ITIS and a specification by a commissioner, the optimal for each case IT infrastructure is elected [Γ.7.1].
5. A proposal and verification of an approach for creating a quality plan for continuity of information security and recovery after a disaster [B.3].

Practical contributions:

1. Design of reference IT infrastructures suitable for the needs of micro, small and medium business companies. Their reliable models have been created and the quality indicators—calculated [Γ.7.3].
2. Validation of the efficiency of the author's approach to choosing the optimal IT infrastructure when designing and assessing data centers [Γ.8.7].
3. A proposal for a process approach in compliance with the European regulations for protection of natural persons in terms of processing their personal data and providing the free transfer of such data. The technical measures needed to satisfy the requirements of these regulations have been defined [Γ.8.5].
4. An analysis has been conducted concerning the protection of personal data and intellectual property in the information security management systems and the zones for improvement, to which the organizations must pay attention, have been defined [Γ.8.6].
5. A scientometric study has been conducted on the dynamics of international scientific communications on the problems of the electronic patient record and the application of cloud technologies [Γ.8.15].
6. An analysis has been conducted on the actual degree of readiness to provide information security continuity in organizations from different business sectors and of various sizes; the weaknesses have been

established and the zones for improvement, to which the organizations must pay attention, have been defined [B.3].

7. An analysis has been conducted on the impact of the coronavirus pandemic on the challenges for universities when facing the new reality and justification of the strategies to handle them has been provided [Г.7.4].

I have no doubt of the authorship of the applied research and practical contributions of Ch. Assist. Prof. Rosen Radkov, PhD outlined above. My statement is based on the following: he is the sole author of the monograph and of 14 of the publications; the candidate is the lead author for 6 of the publications; a protocol for assignment of authorship has been provided for some of the collaborative publications, and I have assumed equal authorship for all contributors listed for the remaining ones.

6. Significance of Contributions to Science and Practice

Upon a comprehensive assessment I have established that the contributions of eng. Rosen Stefanov Radkov, PhD have applied research characteristics, could be applied in practice and classified as follows:

- Enriching knowledge and systems through formulation of innovative approaches in existing scientific fields;
- Developing modified algorithms, methods and designs and obtaining supporting facts.

7. Critical Remarks and Recommendations

Based on the analysis of the work submitted for review within the present competition, I would make the following remarks and recommendations to the prospective work of Ch. Assist. Prof. eng. Rosen Radkov, PhD:

1. The number of scientific publications in renowned scientific journals and forums is relatively small.
2. The applicant should seek possibilities for publishing the results of his scientific research in editions and conferences indexed by SCOPUS and WEB OF KNOWLEDGE databases.
3. He is recommended to continue his active work with PhD students, trainees, and young scientists in order to build a team with the capacity to obtain more meaningful results and to participate in national and international research projects and programs.

8. Personal Impressions and Statement of the Reviewer on the Remaining Aspects of the Candidate's Activities

I have not met the candidate Ch. Assist. Prof. Rosen Radkov, PhD. I have worked with his colleagues, who have provided positive feedback about him, his teaching and research activities. The numerous qualification courses that he took part in, as well as the 13 company certificates for practical knowledge and skills that he obtained, are worth noting. Rosen Radkov has taken part in the implementation of 8 projects and 6 practical assignments. Based on the above I can reasonably conclude that the candidate possesses the required knowledge, scientific and teaching experience and skills. I have confidence in my positive evaluation of the candidate and his overall work as a university lecturer and researcher.

Conclusion

The materials submitted for review within the present competition are in line with the scientometric requirements outlined in the Law on Academic Staff Development and the regulations of the Technical University—Varna for awarding the academic position of 'Associate Professor'. Ch. Assist. Prof. eng. Rosen Stefanov Radkov, PhD has performed the relevant teaching, scientific and research work.

In view of the above, I would propose that eng. Rosen Stefanov Radkov, PhD be selected for the academic position of 'Associate Professor' in 5.3. 'Communication and Computer Equipment' professional field ('Computer Networks and Internet' academic subject) at the Department of Software and Internet Technologies with the Faculty of Computer Sciences and Automation at the Technical University—Varna.

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