



РЕЦЕНЗИЯ

по конкурс за заемане на академична длъжност „професор“

по област на висшето образование **5. „Технически науки“**,
професионално направление **5.5 „Транспорт, корабоплаване и авиация“**
учебна дисциплина: **„Навигация в особени обстоятелства“**;

обявен в ДВ бр.89 от 26 октомври 2021, за нуждите на Висше Военно Морско
Училище „Н.И.Вапцаров“, Варна

с кандидат: **доц. д-р Gabriel RAICU** от Румъния, гр. Констанца, зам. ректор по
научните изследвания на Университета „Constanta Maritime University“

Член на научно жури: проф. д-р инж. **Тодор Атанасов Стоилов**
Институт по информационни и комуникационни технологии – БАН, София 1113,
ул. Акад.Г.Бончев бл.2.

I. Общи положения и биографични данни

Основните данни за образованието, научните степени и звания за
кандидата са дадени в Таблица 1.

Таблица 1.

| Име | роден | Висше образование | Научна степен д-р | Доцент |
|------------------|-------------|----------------------------------|--|--|
| Gabriel RAICU | 1972г. , | Няма данни в представеното CV | 2008 г. – Bucharest Academy of Economic Studies Faculty of Cybernetics, Statistics and Economic Informatics | 2013г. – Maritime University of Constanța |

В представените документи за автобиография няма данни за завършеното
висше образование на Gabriel Raicu. През 2008г. защитава образователна и
научна степен „доктор“ в Академия за икономически изследвания в Букурещ със
специалност „кибернетика и икономическа статистика“. Работи в Maritime
University of Constanța от 1997 г. Заемал е длъжности на административен

statistics". He is in Maritime University of Constance since 1997. He was on positions as Administrative director of the Center for Distance Economic Education, lecturer, associated professor, member of the academic management body of the University. His current position is Vice-Rector for Scientific Research and Innovation at Maritime University of Constance.

II. Common presentation of the candidate's materials for the competition

The presented research papers for the competition for the academic position "professor" are prepared according to the legislative requirements in Bulgaria. The Law for academic promotion, The Rules for the application of this law. The internal rules for this position in the Naval University – Varna do not differ from the National legislative ones. That is why the reviewer makes assessments about the candidate achievements towards the Rules for the application of the law.

The candidate presents a list with 50 research publications for this academic position.

In the document "REFERENCE for the completion of the minimal requirements for the academic position professor" the candidate includes all these research publications, in indicators groups B and G of the legislative requirements.

Indicators group A: it is presented a diploma for defense of the educational and scientific degree Ph.D. The title of the Ph.D. thesis is „Expert System to Operate Maritime Container terminal". His specialty is „Cybernetics and Economic Statistics".

The candidate satisfies the requirements for this indicator.

Indicators group B: These indicators insist that the candidate achieves 100 points with habilitation thesis or to have (at least 10) publications, which are indexed and referred to world known data bases. The candidate satisfies this indicator, presenting ten publications.

These papers are published in specialized edition of conferences (MACROMOLECULAR SYMPOSIA, Optoelectronics, Microelectronics, and Nanotechnologies, Modern Technologies in Industrial Engineering, Conference on Informatics in Economy, Advances in Maritime and Naval Science and Engineering, Quality Management in Higher Education).

The presented data about indicators group B give full bibliographic records with corresponding virtual links for assessment of these publications. Unfortunately, the largest part of these links address information source in Romania, which insists authorization data, which the referee does not possess.

The candidate has correctly evaluated his score at 270 points. This score exceeds the level of indicator group B for 100 points. The referee assumes that the candidate satisfies the legislative requirements for this indicator group.

Indicators group G: it insists achieving 200 points. The candidate presents a list of 37 research publications for the categories G5, G7 and G8.

In category G5 it has been presented a monograph „Common terms used in river navigation".

The category G7 is for publications, which are refereed and indexed in world recognizes data basis with scientific information. The candidate presents 13 titles. The publications are included in special editions, published according to international

conferences (International Conference on Management of Technological Changes Location, Greece; ADVANCED TOPICS IN OPTOELECTRONICS, MICROELECTRONICS, AND NANOTECHNOLOGIES, Romania; International Danube-Adria-Association-for-Automation-and-Manufacturing Symposium, Austria; Proceedings of the International Conference on Marine Navigation and Safety of Sea Transportation, Poland and others).

The category G8 concerns publications in no referred editions or edited books with several authors. It has been presented a list with 23 titles of research publications. They have been published on scientific conferences like (The Black Sea Maritime Security Conference, Energy Security in the Era of Hybrid Warfare Workshop; Maritime Transport Conference, Barcelona; Conference on MET, "Safety, Security and Quality Objectives of MET Institutions"; Congress on Modelling and Simulation, Ljubljana and others).

All this set of publications is identified with full bibliographic records with reference links for checks and access. The candidate has evaluated his score for this indicator group to 324.67 points. For this category the referee meets again lack of the publications, but only a set of hyperlinks, which were not accessible. The lasts insist authorization access, which the referee does not have.

The referee has evaluated the presented data up to the requirement of 200 points and did not evaluate the full range of presented publications. The results of the candidate overreach the needed level for group G.

The referee assumes that the legislative requirements for indicator group G are satisfied.

Indicators group D: This indicator requires achieving 100 points. This indicator group concerns citations in scientific publications, monographs, collective preprints, patents, which are referenced and indexed in world recognized data bases with scientific information and citations in non-referenced editions. The candidate presents a list with citations, found per different publications. He evaluates his score to 491 points.

The referee had used the given data up to the level of 100 points. Obviously, following the presented documents, the candidate's result exceeds many times the legislative requirements.

The referee assumes that the candidate satisfies the legislative requirement for this indicator group D

Indicators group E: participation in projects, attracted resources from projects, publication of University textbook. The requirements for this indicator are 150 points.

The candidate presents a list with 6 projects with his participation. Additionally, he was a leader of 4 projects. These projects are declared in the documents of this competition and following their titles they concern activities in national and international programs. There are no given data about their source and amounts of financing.

The candidate also declares authorship of two educational University books.

The candidate has evaluated his score to 338 points. The referee assumes that the candidate satisfies the legislative requirement for this indicator group E.

The final conclusion of the referee confirms that the candidate satisfies the legislative requirement and for part of them he overrates according to his declared research and application activities. The presented lists of publications, citations and

activities allow to be assessed that the candidate overrates the levels of the categories of indicators groups.

III. Assessment of the pedagogical activities of the candidate

The candidate is working in a position of associated professor in academic institution as University in Constance, Romania. The main activities in such academic institution are researches and scientific and pedagogical activities. The pedagogical activities of the candidate are presented with records in his CV. It has been given that on his position as associated professor he teaches courses on topics: Navigation in special conditions, Transport databases, Programming languages and databases, E-Shipping, Information systems in logistics. Additionally he has published two University books. The referee assumes that the candidate has pedagogical activity and experience, which confirms with the requirements for an academic lecturer in University.

IV. Main research and experimental achievements

The candidate presents a list with 50 research publications for this competition. The topics of these researches address the domains as: cybersecurity, advanced technologies for education, telemedicine and diagnoses, management in maritime vessels. He has estimated and classified 14 of his publications with indexes in Web of Sciences and 8 of publications in SCOPUS. The given list of publication doesn't contain data about the available ranks of IF and/or SJR of the editions. The referee was able to see only the abstracts of 23 of the presented titles of the publications.

For the domain of the cybersecurity the candidate defines his achievements and research results as „..... to meet the international provisions on cybersecurity, considering new developments and emerging technologies introduced in the maritime field. A series of specific hardware and software platforms have been developed, designed for cybersecurity simulation, incident management, automatic knowledge exchange of cybersecurity information, open-source threat intelligence discovery platform, automated Ai driven knowledge gathering platform, p2p cybersecurity search engine, etc. Some of the implementations manage to achieve a vast collection of valuable data (over 1.3 million knowledge assets, over 12 million of links indexed by our cybersecurity p2p search engine).“

The referee assesses that the research contribution is related with the development of algorithms, which applies methods of Artificial Intelligence to analyze the conditions for arising and the potential drawbacks, resulting from cyber-attacks.

For the domain of advanced technologies for education, the authors' contributions addresses problems for application of advanced information technology solutions for the management and exploitation of sea vessels. The candidate defines his contributions as „...design, build and launch into operation of autonomous ships and operating equipment....“.

The referee assesses positively the developments for the design of management solutions of autonomous ships in maritime applications.

The advanced information technology solutions have been applied in educational process in University. He defines them in a manner „...The author created the theoretical premises and experimented in practice with the principles of simulating teaching activities and generating a concept of virtual university....“.

The referee finds that the authors' contributions are directed in position for improvement of processes of distant and virtual education on University levels.

The presented abstracts of research publications prove that the candidate achieve research and application results by solving technological problems related with cyber-attacks, autonomous navigation of maritime vessels and by improvement of educational processes in University by virtual tools and methods.

The research results have been presented in publications on international conferences and in editions of international academic publishing houses.

The referee finds that research and application achievements are evident in the presented abstracts, which addresses methods for the application of advanced information technology solutions in the domains of cybersecurity, maritime management and virtual education. The reviewer assesses that the candidates' publications present useful examples of research achievements and applications in engineering solutions.

V. Significance of the contributions for the science and practice

The reviewer assesses that in the researches of the candidate it is evident the will for implementation of advanced technologies for the domains of cybersecurity, management of maritime vessels and virtualization of educational processes. For their successful implementation it has been designed methods and algorithmic solutions, for their application in information and management systems.

The presented list of projects with the candidate participation and management gives evidences about the development of tools for achieving digital security, to provide measures for preservation of critical infrastructures, telemedicine in sea environments, developments of University courses for the domain of exploitation and management of sea vessels.

These participations in projects give indirect proves for the benefits and importance of the researches and application contributions of the candidate for practical exploitations.

VI. Critical remarks and recommendations

The reviewer will share difficulties, which he met during the assessment of the presented documents. The list of publications, which are presented on this procedure, contains 50 positions. But the referee does not find each publication but only 23 abstracts of them. The presented hyperlinks towards the publications address information sources, which were not accessible for the referee, because they insist previously approved authorization. This is a lack for the presented documents and this raises difficulties for the correct evaluation of the authors' results and contributions. The referee also makes a remark about the degree of "Doctor of" sciences, which the candidate claims in indicators group E. According to the Bulgarian legislation the degree "Ph.D." is not the same as "Doctor of sciences" and the candidate does not present evidences about this higher scientific degree in Bulgaria.

I find that the candidate Gabriel Raicu possesses considerable experience in researches domains and for the application of models and methods for the usage of advanced technologies in difficult engineering domains like cyber security,

management and exploitation of maritime vessels and application of new solutions for the University education in virtual environments. This experience is applied for the education in High school and University.

The referee estimates that candidate exceeds the numerical requirements per indicator groups, required by the legislation. This has been given with the presented lists about the research and project activities of the candidate.

I recommend the candidate in his future research and publication activities to present his works not only on conferences but in specialized journals, which have higher influence over the research and academic audience.

Conclusion

The candidate in this competition Associated Prof. PhD. Gabriel Raicu is presented with enough set of research works. In the candidate's works there are original research and practical contributions.

I find that the legislative requirements of The Law for academic promotion and The Rules for the application of this law are satisfied. All upper said and after my acquaintance with the presented documents and their contributions with research and practical results give me ground to suggest **Associated Prof. PhD Gabriel Stancu to take the academic position "professor"** in Naval Academy – Varna, for the scientific domain of High education: 5. **"Technical Sciences"**, professional field of study professional field of study: **5.5 „Transport, shipping and aviation“**, teaching subject: **"Navigation in special circumstances"**

11.02.2022

Reviewer:

Prof. DSc Ph.D.Todor Stoilov