



OPINION

on the materials submitted for participation in a competition for acquiring the academic position “**Professor**” in the field of higher education 5. “Technical Sciences”, professional field 5.13. “General Engineering”, scientific speciality “Ergonomics and Industrial Design”, in the academic discipline “Residential Interior and Furnishing Design”, announced by the University of Forestry in State Gazette, issue 18/01.03.2024, procedure code WWI-P-0224-

123

The only candidate participating in the competition for acquiring the academic position “Professor”, announced in State Gazette, issue 18/01.03.2024 and on the website of the University of Forestry, procedure code WWI-P-0224-123, for the needs of the Department of Furniture Production, is **Associate Professor Pavlina Minkova Vodenova, PhD**, Faculty of Forest Industry, Department of Furniture Production.

The Opinion was prepared by: Professor Petar Yordanov Antov, professional field 5.13 “General Engineering”, scientific speciality “Technology, Mechanization, and Automation of Woodworking and Furniture Industry” from the University of Forestry, Sofia, Faculty of Forest Industry, Department of Mechanical Wood Technology.

1. Brief biographical about the candidate

Associate Professor Pavlina Minkova Vodenova was born on 07.08.1976. In 2000 she graduated from the University of Forestry – Sofia as an engineer, M.Sc. in “Interior and Furniture Design”. In 2017 the candidate defended her dissertation thesis entitled “Implementing the Systematic Approach in Children Environment Design for the Contemporary Dwelling” under the scientific supervision of Assoc. Prof. Yancho Genchev in the professional field 5.13. “General Engineering”, scientific speciality “Technology, Mechanization, and Automation of Woodworking and Furniture Industry”. In the period 2000-2009, Assoc. Prof. Vodenova worked as a furniture and interior designer in several furniture companies. From 2009 to 2020 the candidate successively held the academic positions of “Assistant Professor” and “Chief Assistant Professor” at the Department of Interior and Furniture Design, Faculty of Forest Industry, University of Forestry. Since 01.10.2020 she has been working as an Associate Professor at the Department of Furniture Production, Faculty of Forest Industry, and since 19.03.2024 Assoc. Prof. Vodenova has been acting as the Head of the department.

Assoc. Prof. Pavlina Vodenova is teaching the academic discipline “Residential Interior and Furnishing Design” for the students from the speciality “Engineering Design”, educational and qualification degree of Bachelor, as well as the academic disciplines “Design Process Management” and “Design of Environment for Disabled People” for the students from the speciality “Engineering Design”, educational and qualification degree of Master. The candidate leads seminars in the academic disciplines “Residential Interior and Furnishing Design”, “Design Process Management”, “Design of Environment for Disabled People”, “Stylish

Interior Design”, “Design of Avant-garde Furniture” and “Lighting Fixtures Design” for the students from the speciality “Engineering Design”, educational and qualification degree of Master, as well as seminars in the discipline “Interior Architecture” for the students from the specialities “Technology of Wood and Furniture” and “Computer Technologies in Furniture Industry”, educational and qualification degree of Bachelor.

Assoc. Prof. Pavlina Vodenova has been actively involved in the Erasmus+ Programme of the European Commission as a member of the applicant selection committee at the Faculty of Forest Industry. The candidate is a member of the Faculty Council of the Faculty of Forest Industry and a member of the General Assembly of the University of Forestry.

Assoc. Prof. Vodenova is fluent in English (level B2), Russian (level B1), and French (level A1). She has excellent digital skills for working with specialized software products, e.g., AutoCAD, CorelDRAW, Corel PHOTO-PAINT, Adobe Photoshop, Adobe Illustrator, MS Office, etc.

2. Conformity of the submitted documents and materials of the candidate with the requirements of the Regulations for Development of the Academic Staff at the University of Forestry

The submitted documents and materials of the candidate, Assoc. Prof. Eng. Pavlina Minkova Vodenova, PhD, fully correspond to the requirements stipulated in the Regulations for the Development of the Academic Staff at the University of Forestry.

3. Assessment of the teaching and training activities of the candidate

Assoc. Prof. Pavlina Vodenova is teaching lectures and seminars in the following academic disciplines:

- “Residential Interior and Furnishing Design” – for the students from the speciality “Engineering Design”, educational and qualification degree of Bachelor;
- “Design Process Management” - for the students from the speciality “Engineering Design”, educational and qualification degree of Master;
- “Design of Environment for Disabled People” - for the students from the speciality “Engineering Design”, educational and qualification degree of Master;
- “Stylish Interior Design” - for the students from the speciality “Engineering Design”, educational and qualification degree of Master;
- “Design of Avant-garde Furniture” - for the students from the speciality “Engineering Design”, educational and qualification degree of Master;
- “Lighting Fixtures Design” - for the students from the speciality “Engineering Design”, educational and qualification degree of Master;
- “Interior Architecture” - for the students from the specialities “Technology of Wood and Furniture” and “Computer Technologies in Furniture Industry”, educational and qualification degree of Bachelor.

Assoc. Prof. Vodenova is a member of the teachers’ team of the academic discipline “Design Project (Project Week)” for the students from the speciality “Engineering Design”, educational and

qualification degree of Bachelor.

Assoc. Prof. Vodenova is the author of the curricula of the following academic disciplines taught in Bachelor and Master degrees: “Design Process Management”, “Lighting Fixtures Design”, “Modelling”, “Residential Interior and Furnishing Design”, “Design of Environment for Disabled People”, and “Children Environment Design”.

In the last 5 years, Assoc. Prof. Vodenova has fulfilled the required academic workload in accordance with the requirements of the Rules of the University of Forestry.

Assoc. Prof. Vodenova has been a scientific supervisor of one full-time doctoral student, awarded with the right to defend PhD thesis, as well as the supervisor of more than 35 graduated students from the speciality “Engineering Design” in both educational and qualifications degrees of Bachelor and Master. She has authored more than 110 reviews of diploma theses of students from the specialities “Engineering Design” and “Technology of Wood and Furniture”. The candidate has led a course in “Sketching and Visual Communication” at the Centre for Continuing Education at the University of Forestry.

4. Assessment of the scientific, scientific-applied, and publication activities of the candidate

General description of the materials presented

The candidate Assoc. Prof. Pavlina Vodenova, PhD, has presented the following materials, corresponding to the group of indicators of the Minimum requirements for the academic position “Professor” in the field of higher education 5. “Technical Sciences”, professional field 5.13. “General Engineering”:

- B3 – Habilitation thesis – monograph – **1** (B3.1);
- Γ – Publications after acquiring the academic position “Associate Professor” - **21**. The distribution of publications is, as follows:
 - Published monograph which has not been presented as the main habilitation thesis – **1** (Γ5.1);
 - Published book based on the defended dissertation thesis for awarding the educational and scientific degree “Doctor” or for awarding the scientific degree “Doctor of Science”– **1** (Γ6.1);
 - Articles and reports published in scientific journals, referenced and indexed in world-renowned scientific information databases – **9** (Γ7.1 - Γ7.9);
 - Articles and reports published in non-referenced scientific peer-reviewed journals or in peer-reviewed collective volumes - **9** (Γ8.1 – Γ8.9);
 - Realized original projects in the field of architecture or design – **1** (Γ10.1);
- Participation in national and international research or educational projects - **11** (E18.1 – E19.7);
- Published university handbook or a handbook, used in the school network – **1** (in co-authorship; E23.1);
- Recognised application for utility model, patent or copyright certificate – **1** (E26.1).

4.1. Participation in scientific, scientific-applied, and educational projects

- Participation in national scientific or educational project - **4** (E18.1 – E18.4);

- Participation in international scientific or educational project - 7 (E19.1 – E19.7).

Assoc. Prof. Pavlina Vodenova has participated in the development and/or implementation of a total number of **11 national or international scientific and educational projects**, four of which are financed by the Operational Programmes of the European Union, 5 projects are financed by the Erasmus+ Programme, and 2 projects have other sources of funding. During the implementation of the projects, Assoc. Prof. Vodenova participated in her capacity as a lecturer, expert and leader of various student teams, demonstrating her excellent organizational, communication and creative knowledge, skills and competences for working in national and international work teams.

4.2. Characteristics of the published scientific results

The candidate Assoc. Prof. Pavlina Vodenova, PhD, has presented a total of 25 works and articles published after the acquisition of the academic position “Associate Professor”, which are classified, as follows:

- **B3 – Habilitation thesis – monograph**, presenting and discussing current issues from the field of child-centered social design. One scientific, seven scientific-applied, and eight applied contributions have been outlined in the monograph.

The total number of points by group of indicators “B” is 100.

- **Г5 - Published monograph which has not been presented as the main habilitation thesis** – 1 (30 points);
- **Г6 - Published book based on the defended dissertation thesis for awarding the educational and scientific degree “Doctor” or for awarding the scientific degree “Doctor of Science”** – 1 (30 points);
- **Г7 - Articles and reports published in scientific journals, referenced and indexed in world-renowned scientific information databases** – the candidate has presented 9 scientific articles, corresponding to a total number of 166.66 points.
- **Г8 - Articles and reports published in non-referenced scientific peer-reviewed journals or in peer-reviewed collective volumes** – the candidate has presented 9 scientific articles, equal to a total number of 139 points.
- **Г10 - Realized original projects in the field of architecture or design** – 1 project has been presented within this indicator, corresponding to a total number of 30 points.

The total number of points by group of indicators “Г” is 395.66, which exceeds almost twice the required minimum of 200 points according to the Regulations for Development of the Academic Staff at the University of Forestry.

The candidate Assoc. Prof. Pavlina Vodenova is a co-author of **one published university handbook** (E23.1).

4.3. Reflection of candidate’s scientific activities in the literature (known citations)

Within group of indicators “Д” the candidate Assoc. Prof. Pavlina Vodenova has enclosed a list of a total number of 28 known citations of her works by other authors, as well as the necessary evidential material. According to the type of citations, their classification is as follows:

- Д12 - Citations or reviews in scientific journals, referenced and indexed in world-renowned scientific information databases or in monographs and collective volumes – 10.
- Д13 - Citations in monographs or peer-reviewed collective volumes – 14.
- Д14 - Citations or reviews in non-referenced peer-reviewed scientific journals – 4.

The candidate has reported a **total number of 150 points** by group of indicators “Д”, while the required minimum according to the Regulations for Development of the Academic Staff at the University of Forestry is 100 points.

4.4. Contributions in candidate’s works and articles (scientific, scientific-applied, and applied contributions)

The contributions in the scientific works presented by Assoc. Prof. Vodenova are structured thematically in the following main areas: social design, design of residential interiors and furnishings; furniture and interior design; design of children's environment; application of innovative teaching methods in higher engineering education; design-process management and design-thinking.

The more important scientific, scientific-applied and applied contributions in the works of Assoc. Prof. Vodenova are as follows:

4.4.1. Scientific contributions

1. Social design for children is presented as a process of creating products, services or initiatives aimed at solving or preventing social problems, taking into account the needs and interests of all stakeholders. (B3.1);
2. The emergence of social design for children as a phenomenon that reflects the growing recognition of the importance and potential of design for and with children is examined, as well as the associated challenges and opportunities. (B3.1; Г7.4; Г7.5);
3. A theoretical model and methodological guidelines for the design of individual products and environments intended for children have been created, with continuous consideration of the influence of the function, construction, material, and objective features of this type of interiors. (Г6.1);
4. The application of design thinking has been established as a broad-spectrum methodology that can be beneficial in both the private and public sectors, across industries, in established and start-up companies. It has been proven that design thinking could be a successful tool at the basis of the development of new solutions - products, services, systems, etc. (Г5.1; Г7.5; Г7.9; Г8.5; Г8.7; E23.1);
5. New phases have been added in the interior design process, as well as new connections between them were discovered, in the context of the modern technological development of the design process. (Г7.2; Г7.6; Г7.8);
6. A utility model has been created, representing a system of sensors for analysis and assessment of interior space, zoning and furnishings. (Г7.8; E26.1).

4.4.2. Scientific-applied contributions

1. The importance of social design for children and how it can influence their social, emotional, and physical well-being has been proven. (B3.1; Γ.5);
2. The factors that contributed to the emergence and evolution of social design for children have been traced, summarized, and systematized. (B3.1);
3. Models of social design application that have become sustainable over time have been studied. (B3.1);
4. The main factors influencing the construction of modern furniture and interiors have been extracted and systematized. The relationship between colour, form, composition, material, and lighting has been established. (Γ7.2;Γ 8.1; Γ8.2; Γ 8.3; Γ8.4);
5. The necessary single-purpose products, ensuring the activities in the children's environment in the home, have been systematized. Prospective guidelines regarding the development of the children's environment and the necessary furniture pieces have been summarized. (Γ6.1);
6. A work algorithm has been systematized and defined in the individual phases of the analysis and design of children's furniture and interior. (Γ6.1);
7. The development of the interior as a spatial composition has been studied, considering the main and most important building elements forming the space and the furniture groups included. The interaction between the elements of the three-dimensional composition, in the context of functionality, utility, perception, and compositional principles, has been proven. (Γ7.2; Γ 8.1; Γ8.2; Γ 8.3; Γ8.4);
8. The opportunities for integrating social design as an approach to be used to advance the contemporary design methods and design practices have been identified. (B3.1; Γ7.4; Γ7.5; Γ8.6);
9. The specifics of design thinking have been defined - from the perspective of understanding the needs of all stakeholders - end users, customers, employees, to the identification of needs and the definition of a specific problem. (Γ5.1; Γ8.5; Γ8.6; Γ8.7; E23.1);
10. The possibilities for improving the utility of the living environment have been analyzed. (Γ7.1; Γ7.2; Γ7.6; Γ7.8; Γ8.1; Γ8.2; Γ8.3; Γ8.4)
11. The specific characteristics of students' design education have been analyzed and clarified. (Γ7.3; Γ7.4; Γ7.5; Γ7.7; Γ7.9; Γ8.8; Γ8.9);
12. The primary importance of the development of creative thinking, along with the acquisition of the necessary basic knowledge in the training of future designers, has been established. (Γ7.3; Γ7.4; Γ7.5; Γ7.7; Γ7.9; Γ8.8;Γ8.9);
13. A methodology for conducting project-based design tasks initiated by real investors has been developed, characterized by placing the participants in conditions as close as possible to real ones, and aiming to find a solution to a certain problem within a limited timeframe. (Γ7.3; Γ7.4; Γ7.5;Γ7.7; Γ7.9; Γ8.8; Γ8.9);
14. A sensory method, applicable in studies on the dynamics of residential and public interior living and in particular in the ergonomic, functional and geometric studies of the modern living space, anticipating the gradual conscious exhaustion of ideas and design concepts, has been created. (Γ7.8; E26.1).

4.4.3. Applied contributions

1. The benefits of social design for children have been analyzed. (B3.1);
2. The challenges facing the future development of social design for children have been systematized. Examples, demonstrating how social design can impact children's social, emotional and physical well-being, have been provided. (B3.1);
3. The design thinking methodology has been analyzed and transferred into Bulgarian. (Г5.1; Г8.5; Г8.6; Г8.7; E23.1);
4. New design methods related to the design of children's furniture and environment have been proposed and evaluated. (Г6.1);
5. New methods for studying and designing certain functions, characteristic of the daily life of children of the respective age, have been introduced into the students' training process. (Г6.1);
6. An algorithm of work in the individual phases of analysis and design of children's products and environment has been systematized and defined, which will be useful in the training of students and all specialists operating in the field of interior design. (Г6.1);
7. A methodology for conducting a new module in the training course for the students of the speciality "Engineering Design (Interior and Furniture Design)" has been developed and evaluated. (Г7.3; Г7.7; Г7.9; Г8.8; Г8.9);
8. The impact of design thinking has been studied, as a simple but powerful formula that leads to the creation of solutions with visible added value for the customer. (Г5.1; Г8.5; Г8.6; Г8.7; E23.1).

5. Assessment of candidate's personal contribution

After reviewing the materials submitted for participation in the competition for acquiring the academic position "Professor", I believe the candidate Assoc. Prof. Pavlina Vodenova, PhD, has participated with scientific works that are her own or have been developed with her significant participation. The candidate participates in the competition with 9 articles where she is the only author; in 5 scientific articles the candidate is the first author, and in 11 articles she is the second or subsequent author. Since no separation protocols for the co-authored papers have been presented, I assume that the contribution and participation of all co-authors is equal.

I am convinced that the presented scientific, scientific-applied, and applied contributions in the materials submitted by Assoc. Prof. Vodenova are the results of her own work. The contributions achieved are significant in the scientific field of the announced competition is announced, i.e., in the field of higher education 5. Technical sciences, professional field 5.13. General Engineering, scientific speciality "Ergonomics and Industrial Design", in the academic discipline "Residential Interior and Furnishing Design" and will be extremely useful for both academia and practice.

6. Critical remarks and recommendations

No significant gaps, inaccuracies and errors in the interpretation of the results achieved can be outlined in the scientific works and materials submitted by Assoc. Prof. Vodenova. Some critical comments and recommendations can be made to the scientific works and contributions

presented by the candidate for participation in this competition, the most important of which are as follows:

1. I believe that some of the presented scientific, scientific-applied, and applied contributions could be better formulated and systematized. Some of the contributions concerning a similar scientific problem could be merged.
2. I would recommend developing and publishing abroad a monograph on the subject of the announced competition, which will contribute to the wider international recognition of the works and achievements of Assoc. Prof. Vodenova.

I believe that the remarks and recommendations made on the works presented by Assoc. Prof. Vodenova do not diminish the significant contributions achieved by the candidate.

7. Personal impressions

During her more than fourteen years of work at the University of Forestry, Assoc. Prof. Pavlina Vodenova has constantly demonstrated her excellent professional qualities as a university lecturer and researcher. Assoc. Prof. Vodenova is an example of a highly-educated, hardworking, proactive and respected colleague and lecturer. She is distinguished by her precision, organization, creativity, ability for critical thinking and thinking out-of-the-box, productivity, adaptability, excellent communication skills and skills for working in different work teams, demonstrated in her work on various national and international projects.

8. Conclusion

Based on the presented Self-assessment reference of the scientific and publication activities performed by Assoc. Prof. Pavlina Vodenova, PhD, it can be concluded that the candidate has fulfilled all the requirements for acquiring the academic position “Professor” in the field of higher education 5. Technical sciences, professional field 5.13. General Engineering, scientific speciality “Ergonomics and Industrial Design”, in the academic discipline “Residential Interior and Furnishing Design”. The total number of points of Assoc. Prof. Vodenova on the different groups of indicators is 935.66, and the minimum requirement in accordance with the Regulations for the Development of the Academic Staff at the University of Forestry is 600 points.

In connection with the above, I strongly recommend Assoc. Prof. Dr. Pavlina Minkova Vodenova to be elected for the academic position “Professor” in the field of higher education 5. Technical sciences, professional field 5.13. General Engineering, scientific speciality “Ergonomics and Industrial Design”, in the academic discipline “Residential Interior and Furnishing Design”.