



REVIEW

of submitted materials for participation in the competition
for the academic position "Associate Professor"
field of higher education **5. Technical Sciences**, professional field **5.13. General Engineering**, scientific specialty **Ergonomics and Industrial Design**,
discipline **Design of Residential Interior and Furnishing**

In the competition, announced in The State Gazette, No 32/3.04.2020, as well as the website of The University of Forestry, for the needs of Dpt. "Furniture Manufacturing" at the Faculty of Forest Industry, Procedure Code: WWI-AsP-0320-39, the only candidate participating is Chief Assist. Prof. Dr Pavlina Minkova Vodenova, University of Forestry, Faculty of Forest Industry, Dpt. of Interior and Furniture Design.

Reviewer: Prof. Dr Regina Pavlova Raycheva, professional field **5.13. General Engineering**, scientific specialty **Synthesis of Architecture with Other Arts, Interior and Architectural Design**, from the University of Forestry, Faculty of Forest Industry, Dpt. of Interior and Furniture Design.

Pavlina Minkova Vodenova was born in 1976. She graduated the Financial Management Secondary School in Sofia, holding the qualification of Specialist Accountant. From 1995 till 2000, she is an undergraduate at the University of Forestry, the Master program in Interior and Furniture Design, and graduates with the qualification Engineer-Master in **Interior and Furniture Design** in the year 2000 with the first cohort of the newly found program with basic professional skills in Residential Interior Design and Furnishing; Design of Public Interior, Structural Design of Furniture, Non-wood Materials in Furniture, Styles in Interior and Furniture; Form-Formation, Computer-Aided Design of Furniture, etc.

The candidate began her professional career with different furniture companies, among them Kammarton Bulgaria, holding the position of Product Manager for Office Furnishing and Designer.

Her teaching career started at the UF in 2009 as Assistant Professor, and from 2018 was appointed Chief Assistant Professor. The candidate leads seminar classes at the Bachelor Program in "Engineering Design (Design of Interior and Furniture)"; after obtaining Doctoral Degree, she also teaches at the Master Program of "Engineering Design". The Candidate teaches also at the New Bulgarian University, lecturing and holding classes as part-time teacher in "Techniques and Materials", "Basics of Structural Design Part 1", "Basics of Structural Design Part 2", for the Program "Interior Design".

After participation in a competition, Pavlina Minkova Vodenova started part-time Doctoral studies in 2013. In 2017, she was awarded her Doctoral Degree with her Doctoral Thesis entitled *The Systematic Approach in Children Environment Design for the Contemporary Dwelling*, under the academic Tutorship of Assoc. Prof. Dr Yantcho Genchev.

Pavlina Vodenova actively participated in the Erasmus program as group leader for students in Intensive Programs abroad. She participated actively in a number of educational scientific projects at the UF, as jury member and as a member of a University Accreditation Committee for the procedure of Specialty Accreditation, Doctoral Programs and Institutional Accreditation. Member of the Organizational Committee of the International Science Conference Innovations in Forest Industry and Engineering Design – INNO. The candidate participated in the organization, preparation and presentation of the Stand of UF at the Expo Technomebel and The World of Furniture, held at Inter Expo Center in Sofia.

The candidate has also taken part in Student Projects Evaluation; was a member of juries for study events: Videoclip Marathon entitled *Contemporary Tendencies in Design and Composition* in 02.12.2019. The candidate is proficient with AutoCad, CorelDraw, Corel Photo-Paint, Adobe Photoshop, Adobe Illustrator; SketchUp, MS Office, etc. She speaks English (B2 level – Upper Intermediate Level) and Russian (B2 level) and A1 – Beginner level of French language.

2. Compliance of the submitted documents and materials of the applicant with the Rules of Development of Academic Staff at the University of Forestry.

The submitted documents and materials of Chief Assist. Prof. Dr Pavlina Vodenova comply fully with the requirements, according to the Rules of Development of Academic Staff at the University of Forestry in Sofia. Documents were submitted in perfect order, numbered systematically in two folders, which is done neatly and precisely.

The presented reference for compliance with the minimum National Requirements for obtaining the academic position Associate Professor is correctly done and reflects the basic science achievements (published monographs, books, papers and reports at conferences at home and abroad, as well as citations of science papers) of the applicant for Associate Professor Chief Assist. Prof. Dr Pavlina Minkova Vodenova. From the report, it is obvious that all minimal requirements are met, including:

- Indicator "A": Diploma for a **Doctoral Degree** with Diploma № LTU-2017-95, issued on 31.10.2017 by the University of Forestry (50 points);
- Indicator "C": The applicant has published a **monograph** on the topic: Design Methodology in Interior Project Development, Sofia, 2019, Avangard Prima, ISBN 978-619-239-278-9, 156 p., science Reviewers: Prof. Dr Arch. Regina Raycheva, Prof. Dr Eng. Vassil Jivkov, (100 points).
- Indicator "D": The Applicant participates in the Competition with **one monograph** and **one published book**, based on her Doctoral Thesis, one textbook in co-authorship, **12 science papers, 4 publications** published in Conference Proceedings (343,31 points).
- Indicator "E": The applicant has found and indicated **22 citations** in Appendix 8 – Note Self-Evaluation, as follows: **5 citations** in scientific publications, referenced and indexed in world-famous databases of scientific information (Web of Science and SCOPUS; **3 citations** in monographs and collective volumes with scientific review; **14 citations** in non-referenced reviews with scientific review (87 points).

All the above totals up to **580,31**; whereas the required number of points for obtaining "Associate Professor" academic position are a total of 400; with which the applicant over-complies with the National Minimum Requirements for scientific-research and teaching-lecturing activity of the candidate for the position of Associate Professor at Higher Education Field 5. Technical science, Professional Field 5.13. General Engineering.

3. Assessment of the Candidate's educational and pedagogic activities (work with students and doctoral students).

In the Certificate from 16.04.2020 we can see that Pavlina Vodenova had led seminar classes in the following courses in the Engineering Design Bachelor Program: Design of Residential Interior and Furnishing, Public Interior Design, and is also the member of teacher team leading the practical study module "Project Week". After obtaining her Doctoral Degree, the applicant teaches also at the Master Program of Engineering Design, leading still other 5 seminar courses: Design for Disabled People (lecturing and seminars); Management of design process, Design of Period Interior, Avant-garde Furniture Design, Lighting Fixture Design. The applicant also teaches at the New Bulgarian University. As an active teacher, Pavlina Vodenova co-authored the book "Management of Design-Process". She has developed two modules for electronic distance learning at the University of Forestry, in the platform Blackboard (e-learn.ltu.bg): "Furnishing the "Day Zone" of the dwelling" and "Furnishing of the "Night Zone" of the dwelling".

During the past years, Chief Assist. Prof. Vodenova has actively participated in the Erasmus Program as a leader of students in international intensive programs, implemented consecutively in 2011 in Zvolen, Slovakia; 2012 in Brno, Czech Republic, 2013 in Seinäjoki, Finland and 2014 in Barcelona, Spain.

4. General description of submitted materials.

The applicant Chief Assist. Prof. Pavlina Minkova Vodenova participates in the competition with the following works:

- Monograph: 1 [C3.1];
- Published books – 1 [D6.1];
- Publications – 23, after obtaining Doctoral Degree - [C3.1, D6.1, D7.1; from D8.1 to D8.20 including].

The publications could be classified as follows:

By type:

- Publications in scientific journals – **12** [D8.2; D8.7; D8.8; D8.9; D8.10; D8.12, D8.13, D8.15; D8.16; D8.18; D8.19; D8.20];
- Publications in proceedings of scientific forums – **4** [D8.3, D8.6, D8.8, D8.9];
- Scientific popular publications – **5** [D8.1; D8.2; D8.4; D8.11; D8.14].

By significance

- Articles in reviews with Impact Factor – **0**;

- Articles in reviews without Impact Factor – **12** [D8.2; D8.7; D8.8; D8.9; D8.10; D8.12, D8.13, D8.15; D8.16; D8.18; D8.19; D8.20];
- Papers in proceedings of scientific forums – **4** [D 8.3, D 8.6, D8.8, D 8.9];
- Plenary reports – **0**;
- Monographs – **1**;
- Books – **1**.

Place of publication:

- Articles in Bulgarian and foreign journals referenced in Web of Science and SCOPUS – **2** [D7.1; D8.8];
- Articles in Bulgarian and foreign journals referenced outside Web of Science and SCOPUS – **10** [D8.2; D8.7; D8.10; D8.12, D8.13, D8.15; D8.16; D8.18; D8.19; D8.20]
- Publications in proceedings of international science forums - **4** [D 8.3, D 8.6, D8.8, D 8.9].

Language of the publications:

- In Bulgarian – **11** [C 3.1, D 6.1; D 8.1; D 8.2; D 8.4; D 8.5; D 8.8; D 8.11; D 8.14; D 8.15; D 8.19];
- In foreign language - **12** [D 7.1; D 8.3; D 8.6; D 8.7; D 8.9; D 8.10; D 8.12; D 8.13; D 8.16; D 8.17; D 8.18; D 8.20];

Number of co-authors:

- Sole authorship – **11** [C3.1; D6.1; D8.1; D8.2; D8.4; D8.9; D8.11; D8.13; D 8.14; D8.18; D8.20];
- One co-author – **6** [D8.5; D8.6; D8.7; D 8.12; D8.16; D8.17];
- Two co-authors – **4** [D7.1; D8.8; D8.15; D8.19];
- Three and more co-authors – **2** [D8.3; D8.10].

5. Impact of the applicant's scientific publications on scientific literature (known citations)

- Total - **22 citations**;

By type of quoting publications

- In Scientific publications, referenced and indexed in world-famous database with scientific information or monographs and collective volumes (Web of Science and SCOPUS) – **5 citations** (50 points);
- In monographs and collective volumes with scientific reviewing - **3 citations** (9 points);
- Citations or reviews in non-referenced journals with scientific review – **14 citations** (28 points)

6. Evaluation of scientific or applied scientific and publication activity of the candidate

According to the submitted Annex 10.5, the applicant Pavlina Vodenova actively participated in a number of educational scientific projects at the University of Forestry. Of the international educational projects, Pavlina Vodenova took part in **4 projects**, financed under the "Erasmus" program, accordingly an International Intensive Program "Green Emotions" at Zvolen Technical University, Slovakia (2011), Intensive program "Building with Sustainable Resources" at the Mendel University in Brno, Czech Republic (2012), Intensive program at the Seinäjoki University, Finland (2012), Intensive program "Urban Regeneration" at the ELISAVA University in Barcelona, Spain. Another educational project is the International student workshop "LED Light up the Balkans" at the National Art Academy in Sofia.

As a young scientist, Pavlina Vodenova took part in **4 projects**, as follows: BG051PO001-3.1.09-0019 „System for Qualifications and Career Growth of Teaching Staff at the University of Forestry - Sofia“, BG051PO001-3.3.06-0056, „Support for the Development of Young People at the University of Forestry“; BG051PO001-4.3.04-0052, „Development of Electronic Distance Learning Center at the University of Forestry“; all of the above were financed by "Human Resources Development" Operative Program, co-financed by the European Social Fund of the European Union. Finally, the BG05M2OP001-2.009-0034 Project „Support of Scientific Capacity Development at the University of Forestry“, financed by "Science and Intelligent Growth" Operative Program, co-financed by the European Union through the European Structural and Investment Funds.

According to the submitted Annex 10.5, the applicant participated as an expert or member of author collective in the following **3 applied projects**, as follows: "Modernizing Center for Transfer of Scientific Knowledge in Accordance to Practice Needs", Contract No ФДП-2018-Б-5 "Development of the Design for Furnishing a Conference Room at the Barzia Experimental Forest Range, financed by the 2020 University Plan.

7. Contributions (scientific, applied-scientific, applied)

Scientific-theoretical Contributions

The Applicant contributed in the following areas: design for children's ambience; methodology of interior design; introduction of a new project phase: the design concept. They are listed as follows:

- Defining the term "children's ambience", considered as a complex system, and its basic elements, classified according to pre-school growth periods. Implementing system analysis, the applicant considered single-products and furniture systems for children. The analysis undertaken was done to reveal the potential of single- or bi-functional furniture pieces (both single and furniture system products), implemented in children's residential environment [G6.1]. A design process model for single and multi-functional products for children is described at publication [G8.13].
- In the monograph "Design Methodology in Interior Design" [C3.1], an addition was made to known phases of design-process of interior, namely requirements that concern buildings during the last decades, such as sustainability, energy efficiency, etc.
- In the monograph [C3.1], the necessity of a design concept was proven on the basis of system analysis of all factors in the context of up-to-date technological development. The Design Concept was proposed by the author on the basis of research made; this phase is similar to pre-project research and is valid with large and complex public buildings.

Applied-Scientific Contributions

The applicant's applied-scientific contributions include a wide area of scientific themes; these could be grouped as follows: Theory and History of Design [C3.1, D6.1, D8.18]; Issues of Interior Design [C3.1, D6.1]; Furniture Design [D8.8]; Design Education [D8.3, D7.1, D 8.10], Design and Economics [D8.16; D8.19], Adaptation and renovation of buildings [D 8.6; D 8.7], Ecological design [D8.2; D8.20]. They are listed here as follows:

- A historic research of children's furniture and interior development in the 19th-20thC was made, illustrated with examples of designer's work in the 20th and 21st C. An original research was made of children's ambience development in Bulgaria. Both research results were presented and summarized visually in tables [D6.1; D8.18].
- Also analyzed are factors of the subject – children, such as: peculiarities of the phases of psychic and physical development of children in pre-school age and the specificity of children's play from the standpoint of psychology, physiology and anthropometrics. [D6.1]
- Major factors are systematized, that influence contemporary children's furniture and ambience and their interrelations: color, shape, composition, material and lighting. [D6.1; D 8.9; D8.13]
- For each separate functional type of children's furniture, an author's classification according to the factors single-functionality, transformability, bi-functionality and adjustability, was made. All types of furniture were included: beds, chairs, tables, storage furniture, systematized in illustrated tables. [D6.1]
- Single- and multi-functional products for residential use for children were considered from the standpoint of potential for combining activities in a single product. The results were published in the book and two other papers. [D6.1; D8.9; D8.13] An algorithm was defined and systematized for work in the separate phases of analysis and design for children's furniture and interior. [D8.13]
- On the basis of a questionnaire, the opinion of established professionals was researched in order to update the methods of interior design. The results of this inquiry research are published in the monograph. Those phases of design process were researched, that a projects needs to pass through during development. [C3.1]
- The research of key interior elements for the building of interior spatial composition are contributive; they concern the major and most important building elements that form both the space and furniture groups in it; thus proving their interrelation. A research on the Living-Room in the contemporary dwelling in Bulgaria was made. The National Palace of Culture's History and Interior was researched in the same direction of interest. [C3.1; D8.15; D8.17])
- New theories of comfortable seating ("dynamic seating") were established with examples of contemporary furniture pieces that allow movement during use; this research has an analytical-informative character. [D8.8]
- The monograph explores the theme of "energy efficiency of buildings" and its importance for the interior design. [C3.1] The ecological topic in connection with children's furniture was well considered

in the book. [D6.1] In a publication [D 8.8; D8.9], „green design“, „sustainable design“, etc. were considered; product life-cycle improvement and the new concept „Cradle to Cradle“ was also researched together with the choice of less harmful materials. The need of integrating eco-design in current furniture manufacturing and living environment was indicated, of lowering harmful impact on the environment of products and services during their total life-cycle; also indicated and illustrated with different examples was the „Zero-Waste“ concept, more-specifically in construction. [D8.20]

- The applicant's research in the field of residential and public environment found expression in a research of cultural heritage [D8.17], renovation, adaptation and use of existing buildings, thus answering new requirements for sustainable and ecologic environment. The applied-scientific contribution consists in systematizing and analyzing different approaches for the solution of this task. [D8.6; D8.7; D8.15; D8.20]
- A contribution in theory and practice of design education was made by means of the applicant's participation in a series of collective and solo publications concerning the implementation of new methods in interior and furniture design teaching. In them the applicant has demonstrated her skills in research and analysis of different stages of the process [D8.3], of gathering and analyzing results of the introduced new study module. [D7.1, D 8.10] This module's aim is to create an educational instrument for active inclusion of students in a situation where a specific solution to a practical issue should be generated in short time. Also, the candidate made a number of popular publications [D8.1, D8.4, D8.5, D8.11, D8.14], which helped the dissemination and popularization of the method in the specialized press.
- Design thinking definition and implementation in business is yet another applied contribution to be discovered in the works of the candidate. Design thinking, researched and demonstrated to be an up-to-date methodology with potential for development of products, services and programs. Certain aspects of designer work, such as visual representation, branding, research of product life-cycle, the standpoint of different stakeholders in the process, have been the base for a holistic strategy of company development. In this connection we can include the publication on outsourcing, more specifically its connection with product design. [D 8.12; D 8.16; D 8.19]

Applied Contributions

- A research, analysis and an illustrated table systematize existing nursery rooms in architectural plans of residences throughout the country, useful for designers facing similar assignments. [D6.1]
- Sports products and equipment were added to other furniture items for children; these with the aim to stimulate physical activity of children. [D6.1]
- Demonstrated were and systematically approved methods for design of children's ambience and furniture; they were well illustrated with student projects. The applied contribution consists in a clear division of different tasks in consecutive work phases. [D8.13]
- Methods were researched and introduced in student education for research of specific functions, characteristic of everyday children's life at a given age. [D8.13]
- The indicated algorithm of the design process phases is useful both for the study process of students and for all professionals in the field of interior design. [C3.1]
- Active participation of the applicant in the collectively developed and implemented methodic of implementing the new module of Engineering Design Bachelor program, called „Project Week“ (new name „Design Project“) is very important. It was done with the aim to solve designer assignments by real investors for a short time. The applicant has helped to clearly determine the phases of special importance for the implementation of the module, such as: theme choice, team building, preparation of the module, etc. [D7.1; D8.3; D8.10]
- The impact of design thinking on creating solutions with added value for the client was researched; established to be a powerful formula, important for the positive result for the companies. [D8.12; D8.16; D8.19]
- The change in lifestyle of people was followed in a publication on the living-room [D8.15] as a major catalyst for changes in spatial organization in dwellings, with impact on the architectural environment. [C3.1; D6.1]
- The thesis for development of design concept and the results of the theoretic and methodic research carried out is a useful practical methodical guideline for development of more demanding and complex design assignments. [C3.1]

8. Assessment of the applicant's personal contribution

After getting acquainted with all works, submitted by the candidate for this competition for the academic position Associate Professor, I am convinced that they, as well as the contributions contained in them, were reached with the active participation of the candidate, by means of developing scientific research issues. Both basic works: the monograph and the book [C3.1, D6.1], were a result of single authorship of the candidate, as well as the papers D8.1, D8.2, D 8.4, D8.11, D8.14 that are popular, and the papers D8.9, D8.13 и D8.18 that are scientific. The rest of the scientific works are in co-authorship, correctly indicated by the candidate, demonstrating serious achievements and skill for team work.

9. Critical Remarks

In spite of the unquestionable achievements of the applicant, I have the following remarks:

Some English texts presented need proofreading. There are, in the book, certain spelling mistakes and mistaken names and nationality of one designer in the work D8.18 (Achile Castiglioni is an Italian, not German designer), one mistaken name of a referenced source author in the monograph [C3.1]: „Pefia”, instead of Peña. In the publication in English [D 8.18], there are also some mistaken names („Stark”, instead of Starck, Otto Krohonen, instead of Otto Korhonen, “bulgarian” instead of “Bulgarian”) etc. Certain topics, already developed in the dissertation, were included in two articles, thus constituting a repetition. In the list of contribution, submitted by the applicant, certain popular articles were included, which is not correct, since they have an informative and not scientific nature. The term “Design Concept”, introduced in the monograph [C3.1] is not enough clarified and not illustrated with an example. It is not precisely indicated what documents (written or drawings) should be presented to the client in this stage.

10. Personal Impressions.

I know the applicant Chief Assist. Prof. Pavlina Vodenova in my capacity of lecturer from the time of her undergraduate study and later, as a Doctoral student, with very good personal impressions of her. She has excellent teacher skills, is communicative, energetic, strict, and disciplined; capable of good contacts with students and to organize them well, to teach her content and reach results with them. As a scientist, she demonstrates hard-working, consistency, good writing, and a will to participate in different research projects. As a colleague, the candidate is ethic, very good in independent- and team work, excellent in handling large projects, such as monographs and books, research for publications in wide science areas in prestigious press; all this giving me the grounds to expect an excellent academic career in future.

11. Conclusion:

In spite of some remarks, that do not aim at underestimating all contributions made, and in connection with all above indicated facts, I propose that Chief Assist. Prof. Pavlina Minkova Vodenova be elected to the “Associate Professor” position in the discipline Design of Residential Interior and Furnishing in Professional Field 5.13. General Engineering, Scientific Specialty Ergonomics and Industrial Design.

22.07.2020

Date

Signature of the Reviewer:
/Prof. Dr Arch. Regina Raycheva/

Забележки:

1. Препоръчителен обем на рецензията – 6-8 стр.
2. По усмотрение на рецензента към съдържанието на рецензията могат да бъдат добавяни и други точки.