



## OPINION

on the materials submitted for participation in a competition for „**Associate Professor**” in the field of higher education **5. Technical science**, Professional field **5.13. General engineering**, scientific specialty **”Ergonomics and Industrial Design”** in the discipline **”Residential Interior Design and Furnishing”**

In the competition for associate professor, published in the State Gazette No32 from 03.04.2020, with the code WWI-AsP-0320-39 and on the site of the University of Forestry with the code WWI-AsP-0320-39 for the needs of the Department of “Furniture Production” at the Faculty of Forest Industry, as a candidate participate **Chief Assistant Professor Pavlina Vodenova, PhD**, Faculty of Forest Industry, Department of “Interior and Furniture Design”

**Opinion Prepared by: Professor Vassil Jivkov Jivkov**, PhD, Professor in a Professional Field 5.13 General Engineering, from University of Forestry

### 1. Brief biographical data for the candidate

The candidate Chief Assis. Prof. Pavlina Minkova Vodenova. PhD, was born on August 7, 1976. She graduated in 2000 as a Master of Engineering Design in Interior Design and Furniture Design at the University of Forestry, Sofia. In 2017 she defended her PhD thesis on the topic "Systemic approach to the design of children's environment in modern housing" with a supervisor - Assoc. Prof. Yancho Genchev, PhD. From 2000 to 2009 she worked as a furniture designer in the following furniture companies: SKS UniDesign, AVEL - 52 EOOD, AGON OOD and CAMMARTON BULGARIA EOOD. Since September 2009 she has been selected as a full-time assistant in the discipline "Residential Interior Design and Furnishing" at the Department of Interior and Furniture Design at the University of Forestry, and since 2018 as a "Chief Assistant".

Chief Assis. Prof. Pavlina Vodenova has actively participated in working groups on accreditation of specialties at FGP, accreditation of PhD programs and institutional accreditations, and procedures for post-accreditation control, as a member of the commissions for preparation of materials.

For the period 2016-2020 she is a member of the Organizing Committee of the International Scientific Conference "Innovations in the Forest Industry and Engineering Design" INNO.

### 2. Correspondence of the submitted documents and materials of the applicant according to the Rules of the Development of academic staff at the University of Forestry

The submitted documents and materials of the candidate Chief Assis. Prof. Pavlina Vodenova are in full compliance with the requirements required by the Rules for DAS in the LTU.

### 3. Assessment of the candidate's educational and pedagogical activities (work with students and PhD students)

Chief Assis. Prof. Pavlina Vodenova gives lectures and exercises in the following study disciplines:

- **"Design of Residential Interior and Furnishing"** - "Engineering Design (Interior and Furniture Design)", Bachelor Program, with 60 hours of seminars (from 2009 to now)
- **"Design of Public Buildings Furnishing"** - "Engineering Design (Interior and Furniture Design)", Bachelor Program, with 75 hours of seminars (from 2019 to now)
- **"Modelling"** - "Engineering Design (Interior and Furniture Design)", Bachelor Program, with 30 hours of seminars (from 2009 to now)
- Member of the teacher's team conducting a practical module "Project Week", currently **"Design Project"** for students studying "Engineering Design" at the Bachelor's Degree
- **"Design of Environment for Disabled People"** - "Engineering Design (Interior and Furniture Design)", Master Program, with 15 hours of lectures and 30 hours of seminars (from 2019)
- **"Design of Period Style Interior"** - "Engineering Design (Interior and Furniture Design)", Master Program, with 30 hours of seminars (since 2016)
- **„Design of Avant-Gard Furniture"** - "Engineering Design (Interior and Furniture Design)", Master Program, with 45 hours of seminars (from 2016 to now)
- **"Design of Lighting Fixtures"** - "Engineering Design (Interior and Furniture Design)", Master Program, with 60 hours of seminars (from 2016 to now)
- **"Design of Furniture for Mass and Serial Manufacturing"** - "Engineering Design (Interior and Furniture Design)", Master Program, with 60 hours of seminars (from 2016 to now)

From 2009 till 2015 the applicant lectures and leads seminars in the disciplines "Techniques and Materials", "Basics of Furniture Construction Part I" and "Basics of Construction Part II" as a part-time lecturer at the New Bulgarian University.

Chief Assist. Prof. Pavlina Vodenova developed teaching programs for the disciplines "Management of Design Process", "Design of Lighting Fixtures", "Modeling" and "Design of Residential Interior and Furnishing" at the UF. For the period 2009-2015, she developed study programs for the course in "Material Science and Technology", "Basics of Furniture Construction Part I" and "Basics of Construction Part II" at NBU.

For the last 5 years, she has overreached her norms in the required by the DAS at UF for her teaching load.

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

##### **4.1 General description of submitted materials.**

Chief Assist. Prof. Pavlina Vodenova presented for the competition the following materials in compliance with a group of indicators of Minimal Requirements for obtaining the academic position of Associate Professor, field of higher education 5. Technical Sciences, professional field 5.13 General Engineering:

- B3 – **Habilitation work – monograph** – 1; single-authored, 156 pages.
- G – **Publications and author design projects** after obtaining the Doctoral Degree – 23.

Publications are distributed in the following way:

- G6 – Published book based on the defended Dissertation Thesis for obtaining the educational and scientific degree of Doctor – 1.



- G7 – Science papers in scientific journals that have been peer-reviewed and indexed in world-renown data-bases of scientific information (Web of Science and SCOPUS) – 1, in co-authorship;
- G8 – Scientific papers in scientific journals and proceedings - 20;
- G10 – Implemented author design project in the field of architecture and design – 1.

In the two of presented papers (G8.3 and G8.10) I co-authoring with the applicant and do not review them.

Although according to the Law of Development of Academic Staff in Republic of Bulgaria, and Rules of Development of Academic Staff at the University of Forestry no points are required under group indicators "E", Chief Assist. Prof. Pavlina Vodenova presents a considerable number of realized projects, as well as three teaching textbooks.

- **E18 – Participation at National Educational Projects** – 9. Additionally, Chief Assist. Prof. Pavlina Vodenova submitted proof material for participation at three applied projects.
- **E24 – Teaching Textbooks** – 3. 1 printed edition in co-authorship and 2 modules for electronic platform for distance learning at the University of Forestry.

#### **4.2 Participation at Scientific, Scientific-Applied and Educational projects**

Chief Assist. Prof. Pavlina Vodenova has participated in **9 educational projects** and **3 applied projects**. In two of the applied projects, interior designs are developed for venues of the University of Forestry.

#### **4.3 Characteristics of Published Scientific Results**

Chief Assist. Prof. Pavlina Vodenova submitted as habilitation work her monograph "Design Methodology in Interior Design", published by the editing house "AVANGARD Prima" in 2019 and printed out on 156 pages. The major direction, on which the author developed her work, is the global research and analysis of basic issues in interior design; the applicant has tried to clarify in detail both the different compositional properties and means, as well as the process of interior design (project, building analysis, information analysis and synthesis of design concept). Exhaustive review has been made of existing publications both of Bulgarian authors as well as foreign ones. Compositional elements, composition means and human factors from ergonomic point of view, as well as those connected with comfort and human metabolism, are considered. Special attention is paid to compositional means and properties in interior design; author's view on these issues is presented. Analyzed and structured are different manners of compiling a design brief and gathering information both of the building, as well as the users, in direct connection with the basic functional and aesthetic requirements. The design object is focused upon in order to synthesize a program and design concept. Systematization is made of types of interior spaces, their links, as well as different layout types. In the monograph, conclusions are made for concept of design methodology with interior design, by means of pointing out the consecutive phases of interior design starting from concept phase till realization.

The monograph complies with the requirements of Law of Development of Academic Staff in Republic of Bulgaria, and Rules of Development of Academic Staff at the University of Forestry.

Chief Assist. Prof. Pavlina Vodenova submitted a **published book** based on the defended dissertation thesis for obtaining the educational and science degree Doctor – "Design of Children's Residential Environment".

The published textbooks (3) by Chief Assist. Prof. Pavlina Vodenova are in the field of taught disciplines and are a proof of acquired teaching experience.

Of the submitted 23 papers and reports from science forums at home and abroad, published after obtaining the Doctoral degree, prevailing numbers are the published ones in Bulgarian language (12) over those in English language (11), of them single-authored – 12, with one co-author – 6, with 2 co-authors – 3, with 3 and more – 2. In publications in co-authorship, Chief Assist. Prof. Pavlina Vodenova, is at first position in 2 publications, at second position in 7, and in fourth positions – in 2.

For **"G" indicator group**, Chief Assist. Prof. Pavlina Vodenova accumulates a total of **343.31** points, which exceeds with 70% the required minimum of 200 points according to the Rules for Development of Academic Staff at the University of Forestry.

#### **4.4 Impact of science publications of the applicant in literature (known citations)**

Chief Assist. Prof. Pavlina Vodenova applies a list of 22 known citations of her works by other authors and copies for proof material.

According to the type of citations they are distributed as follows:

- **Citations or reviews in scientific journals, peer-reviewed and indexed world-renowned data bases of scientific information or in monographs or proceedings** - 5 (D12-1 ÷ D12-2);
- **Citations in monographs and proceedings with peer review** – 3, (D13-1÷D13-2);
- **Citations or reviews in unreferenced scientific journals with peer review** - 14 (D14-1÷D14-4).

According group indicators "D", Chief Assist. Prof. Pavlina Vodenova totals 87 points, which exceeds the required minimum of 50 points.

#### **4.4 Contributions in the applicant's works (scientific, applied-scientific, applied)**

The submitted information by Chief Assist. Prof. Pavlina Vodenova is structure thematically in the following fields: design of residential interior and furnishing; design of furniture and interior; design of children's environment; innovative teaching methods in higher educations; design process and design thinking.

The major scientific, applied-scientific and applied contributions in the submitted works for review of Chief Assist. Prof. Pavlina Vodenova are as follows:

##### **4.4.1 Scientific contributions**

1. New phases in the interior design process are established; new links between them are discovered in the context of contemporary technological development of design process [B-3].

##### **4.4.2 Applied scientific contributions**

1. The necessity is proven of actualization of interior design methods. The phases of interior design process are followed, generalized and systematized; these are necessary steps during project development [B3.1].
2. The making of interior as a spatial composition is researched; the basic and most important building elements are considered, that create space and furniture groups integrated in it. Interaction between the elements of spatial volume composition is



- proved in the context of functionality, utility, way of perception and compositional principles [B3.1; Г8.15; Г8.17].
3. On the basis of theoretic research, a methodic for consecutive steps of studying separate building elements of interior composition is developed as well as its practical application [B3.1].
  4. The historical development of children's furniture is researched for the 19<sup>th</sup> till 20<sup>th</sup> C [Г8.18].
  5. Basic factors that have impact on the building of contemporary children's furniture and interiors are established and systematized [Г8.9; Г8.13].
  6. Options are proposed to group and systematize single-functional pieces in multi-functional products, in connection with the activities in children's residential environment. Work algorithm is created for separate phases of design in creating children's environment and furniture [Г8.9; Г8.13].
  7. Dynamic seating theory is established to be a new manner of thinking about the seating process [Г8.8].
  8. Eco-design is established to be integrated as an approach that has to be applied in contemporary design methods and practices for design and manufacturing of furniture and habitat. This will help saving of resources and stimulating the link with nature [B3.1; Г8.2; Г8.9; Г8.20].
  9. Opportunities for improving utility of habitat are analyzed; therefore, improving the quality of life of its inhabitants. By means of this analysis, innovation in the use of materials, technology and innovative design approaches is encouraged; they are powerful instruments to improve city environment and the life standard of population [Г8.6; Г8.7; Г8.15; Г8.17; Г8.20].
  10. Specific design education is analyzed and formulated. It is proved, that by means of the use of the following key factors: deep understanding of the essence of the creative design profession, the specific in his/her education; establishing a special creative atmosphere and teacher-student relations; the use of new, non-traditional methods of teaching, professional self-confidence is generated and career work for graduates. It is established that in the conditions of competitive situation in education sphere, the basic factor of development of design programs is the opportunity to implement a basic change in the education model in compliance with the needs of contemporary society [Г7.1; Г8.3; Г8.10; Г8.11; Г8.14].
  11. The first-class importance is established of development of innovative thinking, together the acquiring of necessary basic knowledge with education of future designers. This gives rise to the necessity of approbation of contemporary methods that stimulate creativity and the connection between engineering and creative courses [Г7.1; Г8.3; Г8.10; Г8.11; Г8.14].
  12. The methodic of implementing project-based designer assignments (initiated by existing investors) is developed, characterized by creating conditions for participants with the aim to solve a specific problem in short time. This methodic helps for the correct implementation of these designer assignments and guarantees the reaching a positive end result. It could be an important support both for university teachers as well as professionals in other spheres, where the design thinking could be implemented as a successful way to solve problems [Г7.1; Г8.3; Г8.10; Г8.11; Г8.14].
  13. Design thinking is established to be broad-range methodology that has applications both in private and public sectors, in different industries, in established and start-up companies. Its specifics are defined, from focus on understanding the needs of all stakeholders – end users, clients, employees, to identifying the needs to define the specific problem. It is proved that design thinking could be a successful instrument as base of developing new solutions, such as products, services, programs, etc. (Г8.12; Г8.16; Г8.19)



#### **4.4.3 Applied contributions**

1. The systematized work methods in the separate interior design phases could help the stages of real implementation of design process; they could be of use for students and practitioners in the field of interior design [B3.1].
2. An algorithm is systematized and defined of work in separate phases of analysis and interior design, that could be of use both for the study process of students as well as of all professionals in the interior design field [B3.1].
3. The proposed methods of children's environment design are approbated [Г8.13].
4. New methods are introduced in student education for research and development of certain functions, typical of everyday children's life for each respective age [Г8.13].
5. The developed methodic is approbated for the implementation of study module "Design Project" in the course of education for Engineering Design students, previously named "Project Week". This module's effectiveness is proved in the course of several years of approbation, where a number of cases were solved and original solutions of issues was reached in real-life situation set by investors. Clearly defined were stages of particular importance during the implementation of this study module. These were: choice of theme, team-building, preparing and managing the module etc. [Г7.1; Г8.3; Г 8.10; Г8.11; Г8.14].
6. The change of life-style for people is followed as a basic catalyst for changes in spatial organization of the dwelling [B3.1; Г8.15].

#### **5. Assessment of the applicant's personal contribution**

From materials submitted for the announced competition for Assoc. Prof., by the applicant, I can conclude that the contributions are her own work (12 single-authored publications) or are developed in co-authorship; the applicant is in first position in two publications and in second position in 7. No separation protocols are submitted for the papers in co-authorship and I assume that the contributions and participation in them is distributed equally between co-authors.

I consider the contributions, submitted by Chief Assist. Prof. Pavlina Vodenova to be her own work. The achieved scientific, applied-scientific and applied contributions are considerable for the science field of the announced competition, namely "Ergonomics and Industrial Design" scientific specialty; they will be useful for the science and practice.

#### **6. Critical Remarks**

Some critical remarks can be made to the research scientific works and contributions, included in the documentation on the present competition. The most significant of them are as follows:

1. According Art.60, al.4, p.9 of the Rules of Development of Academic Staff at the University of Forestry, I do not accept the scientific, applied-scientific and applied contributions, submitted by Chief Assist. Prof. Pavlina Vodenova under G6.1, because they are identical with contributions of her Doctoral Thesis. In spite of this, the rest of the contributions are significant and fully adequate for obtaining the academic position Associate Professor.
2. It is difficult to equate publications G8.1, G8.4, G8.5, G8.11 and G8.14 with the definition "scientific publication", but they prove the active participation of Chief Assist. Prof. Pavlina Vodenova in the study process and the integration of good practices of design education abroad. It is a fact that the group indicators "G" is over-complied with by the applicant above the necessary minimum. This is a proof of the volume of the applicant's scientific production.
3. One citation under indicator D14 is not correctly mentioned in the submitted list.

4. I could encourage Chief Assist. Prof. Pavlina Vodenova to present her own design projects; this could legitimize her as a successful practitioner.

I do not consider the remarks made to underestimate the presented works of the candidate.

## 7. Personal Impressions

I know the applicant Chief Assist. Prof. Pavlina Vodenova from her undergraduate years in my capacity of her teacher and reviewer of her diploma project in the field of "Furniture Construction" and have excellent impressions of her. From 2009 she became a full-time teacher at the Dpt. "Interior and Furniture Design" at the University of Forestry. I have been working with her during the study process as well as under different projects and can define her as a responsible, communicative and efficient colleague. The applicant is a respected teacher. She works in the field of ergonomics and industrial design; she has research interest in different design processes and design thinking; research and analysis of basic problems of interior design, research of issues in children's environment design, development of new teaching methods. Additional scientific interest represents eco-design for the applicant. Chief Assist. Prof. Pavlina Vodenova is distinguished by her creativity and artistry.

Of scientific research, enclosed under this competition, we can see that Chief Assist. Prof. Pavlina Vodenova is skillful in applying different design methods for the teaching process. She is fluent in English, Russian and French languages. Her participation in a total of 9 educational projects is a clear indication of her teaching skills and activity.

Chief Assist. Prof. Pavlina Vodenova is among the respected staff of Dpt. Interior and furniture Design and the Faculty. In a personal plan I can say that she is helpful and well-meaning. In her relations, she always demonstrates respect towards her colleagues.

## 8. Conclusion

The achieved scientific, pedagogic and applied results, as well as the submitted Report of scientific and publishing activity of Chief Assist. Prof. Pavlina Vodenova prove that she complies with and exceeds all criteria for obtaining the academic position Associate Professor in the field of higher education 5. Technical science, Professional field 5.13. General engineering. Total points are 580; while the minimal requirement according to the Rules for Development of Academic Staff at the University of Forestry for Associate Professor equals 400 points.

**In connection with the above, I strongly recommend that Chief Assist. Prof. Pavlina Vodenova be elected for the academic position "Associate Professor" in the discipline "Design of Residential Interior and Furnishing" in the field of higher education 5. Technical science, Professional Field 5.13. General Engineering, Scientific Specialty "Ergonomics and Industrial Design".**

12.08.2020

Jury Chairman: .....



/Prof. Vassil Jivkov, PhD /