

**The Principles of the  
'Mathematical Structures'  
'Mathematical Analysis and Related Fields'  
'Information Science and Cybernetics'  
Commissions for the Evaluation of the Dissertations and the  
Persons of the Applicants for the 'DSc.' Degree**

The work of the commissions proceeds from the Rules for the Granting of the 'Doctor of Sciences' Degree in the ASCR issued as the Guidelines of the Academic Council of the ASCR No. 5/2014, from the General Principles for the Evaluation of Dissertations and Persons of an Applicant binding for all commissions issued by the Panel for the Granting of the 'Doctor of Sciences' Degree, and governed by the Regulatory Procedure to the Rules for the Granting of the 'Doctor of Sciences' Degree.

**1. General Criteria for the Evaluation of the Dissertations and Persons of the Applicants**

The applicant for the 'DSc' degree must prove that he/she is a distinctive scientific personality and that his/her work has brought original scientific results that are utilised by scientists abroad or built upon in their work. The fulfilment of this requirement will be judged on the bases of studies published in reviewed foreign journals or in peer-reviewed contributions at top international conferences, citations in foreign journals, references in monographs, invitations to present lectures at international conferences, and the commissions will therefore require all of these data.

The perspectives for the evaluation of the person of the applicant include also his/her share in the development of the field, surpassing the dimension of individual research activity, particularly participation in the formulation of the conceptions and directions of research and leadership of research teams, or co-workers.

**2. Required Materials for the Defence:**

Materials listed in the 'Rules':

- a) certified proof of the successful completion of university education (diploma);
- b) certified proof of the granting of the academic Ph.D. degree position or proof of the granting of the scientific degree of Candidate of Sciences or proof of the granting of a title of the same standing;
- c) a curriculum vitae with an overview of the scientific work so far;
- d) the list of publications that form the background materials of the dissertation (according to the requirements defined in the 'Rules');
- e) the theses of the dissertation in ten (10) copies;
- f) the dissertation in five (5) copies;
- g) a statement of in what labour relation the dissertation was created;
- h) an expression of the applicant's own scientific contribution and share of the work if the scientific results listed in the dissertation were acquired with co-authors;
- i) written opinions of two Doctors of Sciences or Professors (See Art. III, Sect. 4);
- j) if the applicant presents a new dissertation in the same field in a new proceedings for the granting of a scientific degree, a statement of who issued the denial decision, the title of the original dissertation and the definition of the differences between the two dissertations.

Besides the above-mentioned materials, the commission requires the presentation of the following supplementary materials:

## **Curriculum Vitae**

It is necessary to present the curriculum vitae in a well-arranged structured form. Besides the usual data of curriculum vitae, it is possible to present information sketching the professional profile of the applicant, in particular it is suitable to list all of the data proving both the scientific excellence of the applicant and his/her share in the creation of the concept of the research, e.g.

- the share in the creation and leadership of the work collective, scientific directions and schools,
- the share in the formulation of the research profile of the workplace,
- the merit in the application of the scientific results of the workplace, if it comes into consideration.

It is further necessary to present the data proving an active share in the life of the professional community in the field that the dissertation affects, e.g.:

- the share in the organisational work,
- scientific acknowledgment,
- work in scientific societies and editorial councils,
- activity in the councils of important scientific and development projects,
- expert activity,
- popularisation of the field,
- share in the organisation of conferences etc.,
- editorial activity,
- the most important foreign invited journeys and their contribution and further data on scientific contacts abroad.

**NB:** At the end of the curriculum vitae, the applicant may attach a personal *commentary* on his/her professional work and possibly further data that he/she considers to be important for the proceedings. The applicant may also state in more detail his/her own share in the joint works.

## **List of Publications**

The applicant should be the author or co-author of at least forty (40) works in international peer-reviewed journals, or anthologies, which are registered in the Zentralblatt or Mathematical Reviews databases. Of these, at least twenty (20) must be in high-impact journals. At the beginning of the list, it is necessary to list which publications are a component of the dissertation.

The list of publications is subdivided in this way:

**A. Monographs.** List only scientific monographs.

**B. Chapters in monographs.**

**C. Original scientific work.** Work is subdivided into these groups:

**C1** Work published in professional journals,

**C2** Work published in peer-edited anthologies.

With the journals from group **C1**, it is necessary to list the impact factor if it exists after the citation.

**D. Other professional work** according to the applicant's consideration. The subdivision of **D1, D2 ...** is selected by the applicant himself/herself. As examples of the items of the subdivision, we list: dissertations (rigorous */viva voce/*, candidate, doctoral, habilitation etc.), contributions in anthologies (other than **C2**), summaries and collective references, proceedings or anthologies (editor or co-editor), research reports, translations, popularisation work, software products, user documentation for software or hardware (if it is used outside of the workplace of the applicant), expert opinions, patents, or textbook texts etc. Work of different character must be distinctly separated.

**E. Invited lectures** (*invited speaker*) according to the applicant's consideration. Only the main lectures at important international conferences etc. are listed. List the complete data on the conference and if possible also the link to the relevant citation of the contribution in the proceedings from the list of the works by the applicant.

**F. Participation in the resolution of grants** according to the applicant's consideration.

Individual items of the list are numbered always within each section **A**, **B**, **C**, ..., **F**. and list the full (unabbreviated) citation. Each of the works listed is included only in one part of the division.

***Citation Responses***

The applicant should have at least fifty (50) proven citations in professional periodicals, peer-reviewed anthologies and monographs. The number and title of the work from the list of the publications of the applicant on which the citation response exists is always listed first. Under this item, the publications which cite it are listed in unabbreviated form. So-called self-citations (the publication is cited in work where the cited person is one of the authors) are not considered as citations. The number of cited responses are continuously numbered **[Q1]**, **[Q2]**, ... The applicant may moreover in a suitable way mark which citations are from SCI and which of his works are cited in monographs.

**NB:** The Commission has the possibility to evaluate in specific cases the level of the publication and the citations within the specific field and its customs and in justified cases to decide on reducing the required number.

***Text of the Dissertation***

If a collection of published scientific works is submitted as the dissertation, this collection must be accompanied by a sufficiently consistent unifying commentary which captures its thematic homogeneity, places it in context (both of the creation of the author and the development of the field) and facilitates orientation in the main problems and trends which the work in the submitted collection reflects.

***Theses of the Dissertation***

It is expected that the theses will be usually translated into English and a part devoted to an expression of the basic ideas, methods and conclusions of the dissertation will be at least fifteen (15) pages long.

Prague, 29 January 2014

Prof. RNDr. Pavel Pudlák, DrSc.

Chairperson of the Mathematical Structures Commission

Prof. RNDr. Vladimír Müller, DrSc.

Chairperson of the Mathematical Analysis and Related Fields Commission

Prof. RNDr. Jiří Wiedermann, DrSc.

Chairperson of the Information Science and Cybernetics Commission

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Discussed and approved on 5 July 2014 by the Panel for the 'Doctor of Sciences' Degree.

prof. Ing. Karel Ulbrich, DrSc.

Chairperson of the Panel for the 'Doctor of Sciences' Degree