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Habilitation Board Decision on the Nomination
for Appointment to Associate Professor

Masaryk University	
Faculty	Faculty of Informatics
Procedure field	Informatics
Applicant	RNDr. Tomáš Masopust, Ph.D., DSc.
Applicant's home unit, institution	Palacky University in Olomouc
Habilitation thesis	Partially Ordered Automata - Expressivity, Complexity, and Applications
Board members	
Chair	prof. RNDr. Jiří Barnat, Ph.D.
	Faculty of Informatics, Masaryk University
Members	prof. Ing. Jan Holub, Ph.D.
	FIT ČVUT v Praze
	doc. Mgr. Michal Kunc, Ph.D.
	Faculty of Science, Masaryk University
	doc. Mgr. Adam Rogalewicz, Ph.D.
	FIT VUT v Brně
	Prof. Marc Zeitoun
	LaBRI, Bordeaux University, France

Evaluation of the applicant's scholarly/artistic qualifications

For the evaluation of the applicant's scientific contribution, the committee members have considered all the materials submitted by the applicant as well as publicly available data about the applicant's scientific activities. The applicant has published (as author or co-author) 37 journal articles indexed in the WOS database, 4 journals articles listed in Scopus,

19 papers in conference proceedings. In most cases, the publications have a small number of authors from which the committee concludes that the contribution of the applicant is significant in most cases. On top of that, at least 16 other publications and research outputs were produced but are not listed in publicly available databases. The committee finds the number and quality of the applicant's research outputs as more than satisfactory for the habilitation.

The scientific output of the applicant is also internationally accepted. The number of citations to the applicant's publication exceeds 200, the majority of the citations are indexed by WoS. The number of citations is not overwhelming, however, the committee considers the number of citations satisfactory for the habilitation.

Moreover, the applicant participated in a couple of research projects, in the role of principal investigator it was the project of Czech Science Foundation (2011), and an Inter-Excellence project of the Ministry of Education (2019). On other projects, the applicant participated in the position of a team member. The applicant also served as a member of the program committee of six different conferences, in some committees he participated repeatedly. He was on the editorial board of the International Journal of Computer Mathematics (4 years), and he is on the editorial board of Kybernetika (8 years). The applicant has also been awarded the Otto Wichterle Award (2011, AV ČR).

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Informatics.

Evaluation of the applicant's pedagogical experience

The applicant gave a public lecture entitled *"Expressivity and complexity of partially ordered automata",* on which the committee members were present. The committee evaluated the public lecture as follows: "*The lecture was given in English with an appropriate pace of speech and language level. The presentation skills of the applicant seem to be well developed. The slides that were used to support the lecture were readable, well-structured, and easy to follow for scientists in the field. Nevertheless, the lecture given was a way more technical than expected from a lecture aimed at a general unaware audience."*

As for regular teaching conducted by the applicant, the committee finds the volume of regular teaching provided by the application as minimal, but satisfactory for the position of associate professor. In particular, the applicant has directly taught or participated in twenty-five instances of semestral courses so far. This volume roughly corresponds to three years of FTE teaching load of an assistant professor according to the local standards. Moreover, the committee highlights the fact that some topics taught by the applicant go beyond the field of the applicant's research. This fact demonstrates that the pedagogical maturity of the applicant is at the level necessary for the position of an associate professor.

In addition to the regular teaching, the applicant has supervised fourteen bachelor's thesis and seven master thesis, which is according to the committee more than enough to demonstrate the applicant's maturity in leading and guiding the students towards their study and research goals. The applicant is the author of the study-supporting text for the course of Graph algorithms taught at FIT VUT since 2009. The applicant has also prepared teaching slides for a couple of other courses.

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Informatics.

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Habilitation thesis evaluation

The applicant has submitted a habilitation thesis entitled *Partially Ordered Automata - Expressivity, Complexity, and Applications.* The thesis takes the form of a collection of articles that is accompanied by an extended introduction (40 pages).

The committee received three reviews on the thesis from the following foreign top experts in the field: - prof. Henning Fernau (University of Trier, Germany)   - assoc. prof. Artur Jeź (University of Wroclaw, Poland)   - prof. Jiří Srba (Aalborg University, Denmark)

All the reviews were generally positive on the quality of the thesis. The overall evaluation of the theses is well summarised in the review of prof. Srba: "*The results contained in the thesis are of primarily theoretical nature, focusing on introducing tight complexity bounds and completing the existing results by closing the remaining complexity gaps, with a particular focus on the problems over a fixed-size alphabet. The achieved results are novel, nontrivial and technically well presented. The thesis has a high level of technical precision and the results are of general interest in the formal language community, as documented by a number of publications in renowned venues.*"

Prof. Jeź in his review pointed out some very positive aspects of the thesis as well. Among others, he appreciates that the collection of articles share a common topic, which is always a good sign of the fact that the applicant is scientifically well-grounded. Prof. Jeź also values the fact that the complexity results given by the applicant are tight and that some of the applicant's results have already been used in follow-up research. He also points out that some of the papers enlisted in the collection are authored by the applicant only, and that some of the papers were published in top conferences.

Prof. Hernau, in his review, summarized what the applicant's thesis is about and laid down quite a lot of technically detailed questions. It can be concluded from his review that prof. Hernau found the thesis very attractive and relevant for his own research. Within that context, the evaluation of prof. Hernau, one of the top experts in the field, is even more valuable. He says: "*T. Masopust has handed in a quite impressive survey of his more recent research, concerning many complexity aspects of (sub)-regular languages. Parts of his work have been presented at highly esteemed conferences like ICALP and MFCS.*"

The committee members carefully evaluated all the reviews of the experts and reached a positive overall conclusion about the quality of the habilitation thesis.

Conclusion: The applicant's habilitation thesis **meet** the requirements expected of habilitation theses in the field of Informatics.

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Secret vote results

Voting took place: electronically

Number of board members		5
Number of votes cast		5
of which	in favour	5
	against	0

Board decision

Based on the outcome of the secret vote and following an evaluation of the applicant's scholarly or artistic qualifications, pedagogical experience and habilitation thesis,the board hereby submits a proposal to the scientific board of the Faculty of Faculty of Informatics of Masaryk University to **appoint the applicant associate professor** of Informatics.

In Brno on 14.04.2021

prof. RNDr. Jiří Barnat, Ph.D.