Evaluation Board Decision on the Nomination for Appointment to Professor

Masaryk University	
Faculty	Faculty of Science
Procedure field	Mathematics - Algebra and Theory of Numbers
Applicant	doc. RNDr. Jan Paseka, CSc.
Applicant's home unit, institution	Faculty of Science, Masaryk University
Board members	
Chair	prof. RNDr. Radan Kučera, DSc. *Faculty of Science, Masaryk University*
Members	prof. RNDr. Jiří Rosický, DrSc. *Faculty of Science, Masaryk University* prof. RNDr. Jan Trlifaj, DSc. *Univerzita Karlova MFF* prof. RNDr. Jan Hamhalter, CSc. *ČVUT Praha* Prof. Walter Tholen, PhD. *York University, Toronto, Kanada*

Evaluation of the applicant's scholarly/artistic qualifications

Since its beginning, the research of Jan Paseka is devoted to ordered algebraic structures. Under the influence of J. Rosický, he started with frames and their connections with pointfree topology and quantales in connection with functional analysis. Immediately after defending his PhD, he spent 10 months at the TU Darmstadt. An often cited result from this period is a joint paper with K. Keimel giving a simple proof of the Hofmann-Mislove theorem – this theorem plays an important role in theoretical computer science. In the theory of quantales Jan Paseka has become an internationally acknowledged expert, which is documented by the offer of the publishing house Elsevier to write the chapter about quantales in the prestigious series Handbook of Algebra. Then Jan Paseka has gradually generated his own research agenda and his own circle of collaborators. Together with Z. Riečanová, he has started to investigate effect algebras which, motivated by quantum mechanics, were introduced by D. J. Foullis and M. K. Bennet in 1994. At the same time, these algebras generalize MV-algebras introduced by C. C. Chang as a tool for studying many-valued logics in 1958. To this distinctly interdisciplinary area Jan Paseka has contributed a number of results published in major international journals. This study also guided Jan Paseka to tense logics to which he devoted, jointly with I. Chajda, a monograph published by the publishing house Heldermann in 2015.

Other than two monographs and two chapters in monographs, Jan Paseka published more than 70 research papers, mostly in impacted journals. In WOS he currently has 222 citations without autocitations. He presented his results at many international conferences (24 conferences in the last 8 years). He is active in the International Quantum Structures Association; he acted as a vice-chair of its conference in Olomouc in 2014. He also served in programme committees of many further conferences and summer schools. Repeatedly, he was successful in getting grants of the Czech Science Foundation. He was a principal investigator of the project "Algebraic methods in quantum logic" in the realm of the programme OPVK MŠMT ČR. Currently, he is co-investigator of the project of MP ČR devoted to a production planning. He brought up two doctoral students and other two he is currently supervising.

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a professor appointment appointment procedure in the field of Mathematics - Algebra and Theory of Numbers.

Evaluation of the applicant's pedagogical experience

Since his appearance at the department as an assistant professor in 1988, Jan Paseka has regularly taught many different courses (linear algebra, cryptography, coding theory, mathematical economy, mathematics for computer graphic etc.). Except for linear algebra, all these courses were established by him. Since 2011 he has also led the seminar on ordered structures. He is an author of a textbook on linear algebra and geometry; he prepared five texts to support his lectures. He is also active in the administrative part of teaching: He guarantees the study programs (since 2002) and he is the deputy head for education at the department (since 2016). He has been the advisor of many successfully finished theses (2 doctoral degree, 41 master degree, and 16 bachelor degree theses).

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a professor appointment appointment procedure in the field of Mathematics - Algebra and Theory of Numbers.

Evaluation of the applicant as a respected and recognized scholarly or artistic figure in a given field

The committee assessed all materials submitted by Jan Paseka, including the recommendation letters and also took into account his public lecture. The committee arrived to the conclusion that Jan Paseka is an internationally acknowledged expert in the area of ordered algebraic structures and their applications. He regularly publishes original research, which creates a visible international response. He created his own research team at the Department of Mathematics and Statistics.

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Conclusion: The applicant **is** a respected and recognized scholarly figure in his/her field. The applicant **has** made a significant contribution to the development of his/her field. The applicant **constitutes** a leading figure in his/her field of scholarship or research.

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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 role as a respected and recognized scholarly or artistic figure,the board hereby submits a proposal to the scientific board of the Faculty of Faculty of Science of Masaryk University to **appoint the applicant professor** of Mathematics - Algebra and Theory of Numbers.

In Brno on 14.05.2019

prof. RNDr. Radan Kučera, DSc.

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