



MATEMATICKO-FYZIKÁLNÍ
FAKULTA
Univerzita Karlova

To: Prof. RNDr. Daniel Ševčovič, DrSc.
Dean of the Faculty of Mathematics, Physics and Informatics
Comenius University in Bratislava, Slovakia

Review of the habilitation thesis entitled “Numerical simulations of earthquake rupture and seismic wave propagation” submitted by Mgr. Martin Gális, PhD.

I greatly enjoyed reading the habilitation thesis of Martin Gális, and despite following his research work for almost fifteen years, it was very interesting to read his papers as a whole and to see his impressive research career trajectory. The thesis consists of a short introductory text and an appendix including nine papers authored or co-authored by Martin Gális. The collected papers demonstrate the outstanding combination of Martin’s research skills and his ability to address new and important research topics. All of the papers have already undergone a demanding review process and most of them have been published in top science journals. There is no doubt that some of the papers, such as Gális et al. (Science Advances 2017), strongly resonate with the needs of seismological research and will have a lasting impact on the community.

The first two papers included in the habilitation thesis were already written during Martin Gális’s PhD studies and demonstrate his early interest in finite-difference methods, benefitting from the collaboration with his excellent colleagues, in particular with Peter Moczo and Jozef Kristek. It is impressive to see that, in spite of this fruitful collaboration, Martin Gális was able to find his own, original research field and to become fully independent of his senior research co-workers in the next years. His recent papers mostly address the problems related to modeling earthquake rupture and corresponding seismic wave radiation. In combination with his skills in modeling the seismic wave propagation, this research focus allows Martin Gális to address a broad spectrum of seismological problems in the full complexity and it significantly extends the expertise of the Bratislava seismological group as a whole.

The papers included in the habilitation thesis prove that Martin Gális is an internationally recognized researcher with excellent disciplinary skills and ability to carry out the research that constitutes a significant progress beyond the state of art. I have no doubt that Martin Gális meets all the criteria required to be awarded by the associate professor (“docent”) degree, and I fully support his application.

In Prague, May 29, 2021

Prof. RNDr. Ondřej Čadek, CSc.
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