Report on the Doctoral Thesis

Algebraic and measure-theoretic properties of the
structures close to Boolean algebras

by

Michal Hroch

The thesis consists of an introduction and of five papers that has been already published (or accepted) in good mathematical or physical journals with impact factor: Mathematica Slovaca, Letters in Mathematical Physics, International Journal of Theoretical Physics (twice), International Journal of Algebra and its Applications.

The theme of the thesis is current, the thesis accomplished its goal, the approach and the solution methods are suitable and compressible. There is quite a few substantial results mainly concerning the possibility to extend a (field-valued, Jauch–Piron, resp.) state, they deepen our knowledge of quantum structures. The minor deficiency is that all papers are written with coauthors, hence the authors own contribution is not explicit thought the authors give him full credit for his contribution.

The thesis fulfills the conditions of independent creative work and contains original results that has been already published or accepted. I do **recommend** the acceptance of this doctoral thesis.

Prague, September 23, 2019

prof. RNDr. Josef Tkadlec, CSc.