

Supervisor's Report on Master's Thesis
Maryia Kapytka: Minion Cores of Clones

The thesis contributes to the recently emerged project of describing the ordering of clones induced by minion homomorphisms. The elements in this partially ordered class are equivalence classes of clones, where two clones are considered equivalent if there exists a minion homomorphism between them in both directions. The ordering of the equivalence classes is by the existence of a minion homomorphism. Each equivalence class can be represented in an essentially unique way (up to minion isomorphism) by the so-called minion core of the clones therein.

The thesis fully describes the ordering and the minion cores of the multi-sorted Boolean clones determined by binary relations. This is an original and significant result. Its proof covers the majority of the thesis, about 60 pages. The result will be submitted to an impacted journal.

Maryia's contribution to this work was significant. Namely, she computed minion cores for a lot of special cases, from which it was possible to see the general pattern. Moreover, a lot of calculations were necessary to prove the non-existence of minion homomorphisms (about 30 pages of the thesis), these are mostly hers.

I think this is a very good thesis and I recommend the thesis be accepted.



Prague, 24 July 2023

Libor Barto