

Dear Editors of Annals of Pure and Applied Logic:

We would like to submit this manuscript titled A New Type of Automated Prover Based on Category Theory and wish to get it published as a research paper in journal Annals of Pure and Applied Logic.

The research discusses the design and implementation of a new way for representing mathematical structures and an unprecedented approach of automated self-improvable reasoning method. Current literature concentrates on precisely demonstrating the entire process of the execution.

The work is not funded by any organization and all research are conducted originally. We would like to declare that the research paper has not been submitted or published elsewhere previously. The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

You may notify the first author of the article is relatively premature, with correspondingly lower age than normal authors so that please be inclusive.

We deeply appreciate your consideration of our manuscript, and we look forward to receiving comments from the reviewers. If you have any queries, please don't hesitate to contact me at the address below.

Thank you and best regards.

Yours sincerely,

First author: Zijian Wang

E-mail: [felix\\_wzj@yahoo.com](mailto:felix_wzj@yahoo.com)

Corresponding author: Shao Xinhui

E-mail: [shaoxinhui@mail.neu.edu.cn](mailto:shaoxinhui@mail.neu.edu.cn)