

## Hanneke Janssen Memorial Prize 2017

The jury received five submissions, two of which were not considered because they failed to meet the deadline and/or did not fall inside the scope of the prize. However there were two submissions of outstanding value: by Alex Mathie (nominated by James Layman) and by Omid Charraikh (nominated by Stephan Hartmann).

The jury has decided to award the 2017 Hanneke Janssen Memorial prize to Omid Charraikh for his paper “On the reality of the wavefunction” and also to single out Matthie’s work for honorable mention, as a close runner-up. If there had been a second prize, it would go to him. Below is a summary of the Jury's deliberations.

On Charraikh:

This work takes on a subject (the Pusey-Barret-Rudolph (PBR) theorem), and the associated claim that it disproves the tenability of an epistemic view of quantum states. In our judgement, this thesis provides conceptually significant new insights to the theorem by providing an analysis of the measurement process along the same lines, to argue that the associated claim does not go through generally.

To be sure, the Jury also had misgivings about the submission: it was not written as clearly as we would expect, especially in chapter 8, and the English needs to be improved before it can be ready for publication.

On Mathie:

This submission is a very well-written and clear discussion of the status of the analogy between thermodynamics and “black hole thermodynamics”. However, the Jury judged there were some weaknesses in this work. First, there is a lack of mention of Hawking radiation, which many believe to be the key to thermal interaction between black holes and thermal systems. And while this lack of attention may be explained by the focus of the Thesis, the point that the Thesis fails to mention the topic at all is considered as a serious omission. Secondly, the Jury would have liked to see more discussion of how much the author’s conclusions depend on the use of Hesse’s view of analogies, when there are so many other views on this issue.

We thus designate the Hanneke Janssen Memorial Prize 2017 to Omid Charraikh.

The Jury:

Jos Uffink (Chair)

Klaas Landsman

Christoph Lehner

Michiel Seevinck

Nijmegen, 15 December 2017