

Report on habilitation application by Dr Paweł Bielewicz

B.F. Roukema

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1 (1) Ocena osiągnięcia naukowego

Bielewicz's cosmology research after his doctoral thesis consists to a large degree of a significant continuation of my own cosmic topology research work carried out both prior to my employment at Nicolaus Copernicus University and since then. Bielewicz has co-authored many publications in prestigious peer-reviewed international journals, with 229 author-normalised citations according to the SAO/NASA Astrophysics Data system (ADS), including some publications in which his contribution is asserted by himself and his co-authors to be mostly his own work. It is quite reasonable to believe that a substantial part of this work in these particular papers was done by him and constitutes peer-reviewed scientific work at the standard expected for a habilitation.

1.1 Reproducibility

Nevertheless, a standard of reproducibility that is increasingly becoming expected in astronomical research is for software related to a journal paper to be free-licensed and publicly available, or, at least, publicly available under an informal licence, with the implicit encouragement of wide re-use, modification, and redistribution of modified copies. None of the candidate's publications give any obvious links to git repositories or similar indications that the reader can easily check and improve upon the results without being forced to rewrite the software from scratch.

As of 2019, this does *not* disqualify Bielewicz from the habilitation, as this 2010's concept of reproducibility is an emerging scientific standard that is not yet considered obligatory. Moreover, „Rozporządzenie MNiSW z dnia 1 września 2011 r.” does not require scientific results to be reproducible; it only requires them to be published in good quality journals.

1.2 Autoplagiarism

However, among the five publications listed as his main work justifying a habilitation are [P2] (Bielewicz & Banday, 2011) and [P3] (Bielewicz et al., 2012), both published

in *Monthly Notices of the Royal Astronomical Society* (MNRAS). MNRAS states on its website¹

“Papers which are found to contain plagiarized (**including self-plagiarized**) material will be rejected” (**emphasis** added by me).

MNRAS continues by stating

“Any re-use of material which has previously been published – **even by the same authors, and/or in the same journal** – must be accompanied by a citation to the original source and the necessary copyright permissions obtained. **Quotation marks should be used** around any text which has been reproduced from elsewhere, in addition to a citation.” (**emphasis** added)

Moreover, Hartman et al. (2012, p25) strongly criticise autoplagerism in the sense of

„zamieszczania tego samego utworu (**lub jego części**) dwukrotnie (względnie wielokrotnie) w wykazie publikacji przedstawianym w staraniach o awans naukowy (**np. przy ubieganiu się o habilitację**).” (**emphasis** added)

In the case of [P2] and [P3]:

1. much of the first paragraph is copied almost word-for-word — “local properties of spacetime geometry . . . can only be constrained by observations.”;
2. the first sentence of [P2].3 is copied almost word-for-word into [P3].3 — “To test the reliability of codes of a 3-torus (Riazuelo et al. 2004).”;
3. almost the whole of [P2].3.1 is copied almost word-for-word into the beginning and end of [P3].3 — “To study the signatures of a given topology, a CMB map . . . $6.6c/H_0$ ” and “The time needed for . . . is about 42 hours.”;
4. almost all of [P2].4 through to the second last paragraph ending “. . . with respect to masking” is copied almost word-for-word to [P3].4 — this constitutes about one and a half pages of double-column MNRAS formatted text;
5. [P2].6, third paragraph, also has a short expression, “constraint concerns only those universe with such dimensions . . . probability of overlooking circle pairs” which is copy-pasted into [P3].7 paragraph 5, but with a reversal of the continuation text from a low probability to a possibly high probability.

These two papers were submitted and published 5–6 years after Bielewicz obtained his doctorate. Bielewicz states that he prepared the texts himself. There appear to be no statements in [P3] stating that text is reproduced verbatim or almost verbatim from [P2].

This is an overwhelmingly clear case of autoplagerism. The normal scientific standard would have been for article [P3] to have been written with appropriate cross-references to [P2] rather than giving the impression of being an almost independent work.

The most appropriate way to redeem this problem would be for Bielewicz to either

¹https://academic.oup.com/mnras/pages/General_Instructions#2.6%20Copyright%20and%20plagiarism

1. request MNRAS to retract² [P3] from publication; or
2. convince MNRAS editors to accept that a revised version of [P3] be submitted for peer review; and post the revised version as version 4 of the preprint³ so that the cosmology community can see whether or not the ArXiv preprint service considers the new version to contain text overlap with [P2] or to be free of text overlap.

Without either of these taking place, it is difficult to see how the habilitation application could be considered to satisfy international academic ethical standards.

2 (2) Ocena istotnej aktywności naukowej

Bielewicz has considerable international postdoctoral experience [§5.11) in the „Rozporządzenie”], referees scientific journal articles [§5.14)], presents his work frequently in seminars [§4.8)] and international conferences [[§4.8), §5.2)] and has experience in science teaching and popularisation [§5.8)]. His work is impact-factored, cited and Hirsch-indexed as registered in the *Onex Corporation/Baring Private Equity Asia* databases referred to in the „Rozporządzenie”, [§4.2), §4.3), §4.4)]. As stated above, the lack of including URLs of git repositories (or the equivalent) of free-licensed, public versions of the software used in his papers follows a weaker standard of scientific activity than what would be expected of a young astronomer in the late 2010’s.

Nevertheless, I consider Bielewicz to satisfy the condition (2) of significant scientific activity.

²<https://en.wikipedia.org/w/index.php?oldid=885270919>

³<https://arxiv.org/abs/1111.6046>

3 Conclusion

It would be a bad precedent for young astronomers in Poland and Europe if this habilitation were to proceed before [P3] is either (i) retracted from publication by the journal *Monthly Notices of the Royal Astronomical Society* or (ii) revised and resubmitted as an original article free of autoplgiarism. The ArXiv preprint service reported the text overlap between [P2] and [P3] in all three preprint versions of [P3] — on 25 Nov 2011, 22 Feb 2012, and 8 Feb 2018⁴ — this situation is already part of the public record.

Thus, interpreting „Rozporządzenie MNiSW z dnia 1 września 2011 r.”⁵ according to generally accepted international scientific standards of authorship [„wkład w współautorstwo”, „autorstwo” — §2, §3.3.a)] in astronomy research and taking into account Hartman et al. (2012)’s MNiSW recommendations,

- (1) *ocena osiągnięcia naukowego* is at present negative;
- (2) *ocena istotnej aktywności naukowej* is positive.

I recommend that the applicant contacts *Monthly Notices of the Royal Astronomical Society* quickly so that “publication” [P3] is officially retracted or republished free of autoplgiarism prior to the meeting of the „Komisja habilitacyjna”.

prof. dr hab. Boudewijn Roukema, Toruń, 15 marca 2019

Literatura

Bielewicz, P. & Banday, A. J. 2011, MNRAS, 412, 2104, [arXiv:1012.3549]

Bielewicz, P., Banday, A. J., & Górski, K. M. 2012, MNRAS, 421, 1064, [arXiv:1111.6046]

Hartman, J., Adamski, A., Gładyszewski, G., & et al 2012, MNiSW, http://www.bbn.uksw.edu.pl/sites/default/files/rzetelnosc_broszura_fin_low.pdf

⁴<https://arxiv.org/abs/1111.6046>

⁵<http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU20111961165/0/D20111165.pdf>