

Waterproof demo

Teaching with a proof assistant

Pim Otte
PhD Candidate

Outline

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Demo

Conclusion

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 - Transferable to paper.

Connection to AI

- Automation

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- Examples: AlphaProof [At24], talk by Terrence Tao [Tao24].

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- Look for checks in times of uncertainty.

**Thanks for your
attention!**

References

-  AlphaProof and AlphaGeometry teams, *Ai achieves silver-medal standard solving international mathematical olympiad problems*, 2024,
<https://deepmind.google/discover/blog/ai-solves-imo-problems-at-silver-medal-level/>.
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-  Jelle Wemmenhove, Dick Arends, Thijs Beurskens, Maitreyee Bhaid, Sean McCarren, Jan Moraal, Diego Rivera Garrido, David Tuin, Malcolm Vassallo, Pieter Wils, and Jim Portegies, *Waterproof: Educational software for learning how to write mathematical proofs*, Proceedings 12th International Workshop on Theorem proving components for Educational software. (ThEdu'23) (Julien Narboux, Walther Neuper, and Pedro Quaresma, eds.), 2024.



Utrecht
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Sharing science,
shaping tomorrow

Joint work with Jim Portegies, Jelle Wemmenhoven and various teams of student programmers

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pim.otte.dev