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Proof assistants in combinatorics on words

Combinatorics of (finite) words is an area where computer assisted formalization may be very helpful. Proofs of even fairly simple results tend to be tedious and repetitive, featuring complicated analysis of cases, which makes them hard (both for referees and readers) to verify. Moreover, despite the short history of the field, important results are sometimes forgotten and rediscovered, or simply repeatedly proven in many papers. Some easily stated problems are vast classification tasks.

We shall discuss how proof assistants can help to tackle these issues and illustrate it by an ongoing formalization project in Isabelle/HOL.