Strong laws of large numbers for lightly trimmed sums of generalized Oppenheim expansions

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In this work, we discuss strong laws of large numbers for lightly trimmed sums of generalized Oppenheim expansions. In this work's first part, we identify a particular class of Oppenheim random variables for which we prove a strong law assuming that only the largest term is deleted from the sum; this result generalizes a strong law recently proven for the Lüroth random variables. In the second part, we drop any assumptions concerning the structure of the Oppenheim expansions and we prove a result for trimmed sums when at least two summands are removed; the latter theorem leads to another asymptotic result which covers the case in which only the largest term is deleted and although this last result is slightly weaker than the one proven in the first part of this work, it is obtained without imposing any conditions on the structure of the involved random variables.

References

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