



Der Wissenschaftsfonds.



SFB Colloquium Series

It is a pleasure to announce a guest lecture with the title

Perfect necklaces and their discrepancy estimates

SPEAKER: **Verónica Becher**, Universidad de Buenos Aires

TIME: Thursday, 12.01.2023, 02.00 pm

LOCATION: JKU Linz, Science Park 2, S2 044

A necklace is a circular word over a finite alphabet. A necklace is (n, n) -perfect if each word of length n occurs exactly n times, at positions that are different modulo n , for any convention of the starting position. I will present different families perfect necklaces and their construction methods. In some cases their exact discrete discrepancy is known (Schiffer 1986; Hofer and Larcher 2022). The minimum discrete discrepancy that a perfect necklace constructed by an arithmetic progression can have is not yet known. An upper bound is obtained from sums of partial quotients of rational numbers with fixed denominators (Levin 1999). We conjecture that there are perfect necklaces constructed from arithmetic progressions with $ND_N = O((\log N)^2(\log \log N))$.

The lecture will be followed by a general discussion.

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