

# BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

**24 October 12:15-13:00**

Seminarraum 05.002, Spiegelgasse 5

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## Lower bounds of non-vanishing sums

### ABSTRACT

In my master thesis I've studied the behavior of two kinds of sums. The first kind is the sum of four  $n$ -th roots of unity. In the second case, we take three algebraic numbers, multiply each with an  $n$ -th root of unity and add them up. In both cases we ask the following question: How small can the absolute value of such a sum be, if we assume that it does not vanish? In the first case we are able to give the minimal value, in the second case we establish a lower bound. We will sketch the proofs and discuss the results.