

## **Vandermonde Nets and Sequences**

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In this talk we consider so called Vandermonde nets, which were recently introduced by Harald Niederreiter and the speaker and which form a new class of digital nets. We introduce existence results for the quality parameter  $t$  and for the discrepancy. One advantage of Vandermonde nets over the well-known polynomial lattices is that there is an explicit construction. This construction is generalized to a construction of digital sequences. By applying methods that are based on global function fields we achieve so-called Vandermonde sequences with asymptotically best-known quality parameters.