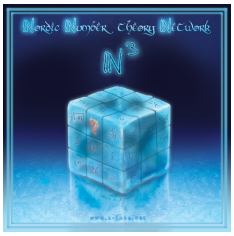
UNIVERSITY OF COPENHAGEN



On the way to Gothenburg 2019

University of Copenhagen,
November 14, 2019
organised by Fabien Pazuki,
with the support of the Department of
Mathematical Sciences of the University of Copenhagen.

Program

	Thursday 14.11 in Aud 8
13:00-14:00	**François Brunault**
14:15-15:15	**Florian Breuer**
15:15-15:45	*Coffee break*
15:45-16:45	**Farbod Shokrieh**
17:00-18:00	**Lars Kühne**
19:00-	*Dinner*

Abstracts

TIME: Thursday 14.11, 13:00-14:00.
ROOM: Aud 8.
SPEAKER: **François Brunault** (ENS Lyon).
TITLE: *Mahler measures and values of L-functions.*
ABSTRACT: At the end of the nineties, Boyd and Deninger discovered a remarkable connection between the Mahler measure of certain two-variable integer polynomials, and the L-function of the associated plane curve. Boyd also gave conditions on the polynomial under which such an identity should hold, and Deninger showed how these numerical identities fit in the framework of the Beilinson conjectures. In this talk I will explain work in progress about a kind of converse, namely the question of which L-values can be (conjecturally) written as Mahler measures. I will mainly discuss the cases of elliptic curves, modular curves and modular forms.

TIME: Thursday 14.11, 14:15-15:15.
ROOM: Aud 8.
SPEAKER: **Florian Breuer** (Univ. Newcastle and Univ. Stellenbosch).
TITLE: *Drinfeld modular forms in arbitrary rank.*
ABSTRACT: Drinfeld modular forms are characteristic-p-valued functions on a characteristic-p Drinfeld period domain, and serve as the function field analogue of classical modular forms. They were first introduced by David Goss in the late 1970's. An extensive literature exists for Drinfeld modular forms in the rank 2 (i.e. one variable) case, but the higher rank (multivariate) case has only recently been given a solid foundation by Dirk Basson, Ernst-Ulrich Gekeler, Richard Pink and myself. I'll give an overview of these developments, concentrating on the analytic theory.

TIME: Thursday 14.11, 15:45-16:45.
ROOM: Aud 8.
SPEAKER: **Farbod Shokrieh** (Univ. Washington).
TITLE: *Heights and moments of abelian varieties.*
ABSTRACT: We give a formula which, for a principally polarized abelian variety (A, λ) over the field of algebraic numbers, relates the stable Faltings height of A with the Néron-Tate height of (A, λ). We also discuss the case of Jacobians in some detail, where graphs and electrical networks will play a role. (Based on joint works with Robin de Jong.)

TIME: Thursday 14.11, 17:00-18:00.
ROOM: Aud 8.
SPEAKER: **Lars Kühne** (Univ. Basel).
TITLE: *The Equidistribution Conjecture for Semiabelian Varieties.*
ABSTRACT: The (Strong) Equidistribution Conjecture for semiabelian varieties yields substantial information on the points of small height on those varieties, including the Manin-Mumford and the Bogomolov Conjecture. Chambert-Loir has settled this conjecture affirmatively in the case of almost split semiabelian varieties. The general case, however, has remained intractable because the canonical height of a semiabelian variety is negative unless it is almost split. In fact, this places the conjecture outside the scope of Yuan's Equidistribution Theorem on algebraic dynamical systems. In my talk, I will outline my recent proof of the (Strong) Equidistribution Conjecture for general semiabelian varieties.