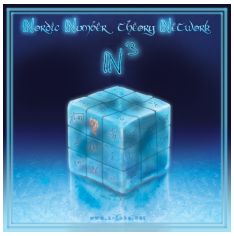
UNIVERSITY OF COPENHAGEN



National Research Foundation

Ganda Day in Copenhagen 2018

University of Copenhagen,
May 14, 2018
organised by Fabien Pazuki,
with the support of the CNRS (France), of the Department of Mathematical Sciences of Copenhagen University (Denmark) and of the NRF (South Africa).

Program

	Monday 14.05
14:15-15:15	**Jean-Marc Deshouillers**
15:15-15:45	*Coffee break*
15:45-16:45	**Ian Kiming**
17:00-18:00	**Florian Luca**
19:00	*Dinner*

Abstracts

Time: Monday 14.05, 14:15-15:15.
Room: Aud 2.
Speaker: **Jean-Marc Deshouillers** (Univ. Bordeaux).
Title: *Some arithmetic aspects of automatic sequences.*
Abstract: In the late 70's, I fell by chance on *automatic sequences* through the problem of the distribution modulo 1 of the sequence $(\theta^n)_{n\in\mathbb{N}}$ where θ is algebraic over $\mathbb{F}_q(X)$. Some questions were then solved, but some are still opened. Some thirty years later this theme turned out to be a clue for solving a question raised by Florian Luca and Igor Shparlinski. Since then, I happened to be connected again and again to this theme. I feel this efficient tool should be somewhere in the mind of any number theorist, and I'll advocate for it. No *a priori* knowledge on automata theory is required.

Time: Monday 14.05, 15:45-16:45.
Room: Aud 2.
Speaker: **Ian Kiming** (Univ. Copenhagen).
Title: *Modular forms modulo prime powers.*
Abstract: I will review basic questions and results from recent years in the theory of modular forms modulo prime powers. This will include a discussion of some of the most basic motivating questions. For the results, I will mostly focus on the work of myself and my co-authors.

Time: Monday 14.05, 17:00-18:00.
Room: Aud 2.
Speaker: **Florian Luca** (Univ. Witswatersrand).
Title: *Prime factors of interesting integers.*
Abstract: Let $\{a_n\}_{n\geq 1}$ be a sequence of interesting positive integers. For a large x we form

$$A(x) = \prod_{n\leq x} a_n.$$

The theme of my talk is *What can we say about the prime factors of* $A(x)$*? How many prime factors does* $A(x)$ *have? How large is the largest one?* We will take a look at what is known about this question when $\{a_n\}_{n\geq 0}$ is one of the sequences of interesting integers like Fermat, Fibonacci, numbers of the form $n! + 1$, etc.