Professor Simon Kristensen, Aarhus University

Title: Arithmetic properties of series of reciprocals of algebraic integers

Abstract:

Questions of irrationality of convergent series of reciprocals of integers is a fascinating one. Among other problems, the topic includes the question of irrationality of odd zeta-values. Of course, lower bounding the degree of such a number is a stronger and potentially harder problem.

I will introduce the problems studied within this field before proceeding with some recent research. In joint work with Simon Bruno Andersen, we provide a general growth criterion on a sequence of algebraic integers, which ensures that the degree of the series of reciprocals is transcendental or of degree at least D. Our result does not shed new light on the odd zeta-values, but it does extend results of Erdös as well as Hancl and Nair.