

2026 Distinguished Lecture Series Presents

# MARYNA VIAZOVSKA

May 4th to 6th, 2026

MS 6627/Zoom

## LECTURE 1 // MAY 4 AT 3PM

### The sphere packing problem

In the first lecture, I will discuss the history of the sphere packing problem, the known upper and lower bounds, and its solution in dimensions 8 and 24. I will introduce the magic functions and explain how they are constructed.

## LECTURE 2 // MAY 5 AT 3PM

### Fourier interpolation formulas

In the second lecture, I will discuss Fourier interpolation formulas and their connection with the magic functions. As an application, I will show how such an interpolation formula leads to the universal optimality of the E8 and Leech lattices.

## LECTURE 3 // MAY 6 AT 3PM

### Formalizing sphere packing

In the final lecture, I will describe the path toward formalizing the sphere packing problem in dimensions 8 and 24. I will discuss the main milestones reached so far, the role of AI, and the challenges posed by large-scale formalization projects.



**EPFL**

RESEARCH AREA

- Number Theory

WEBSITE

- <https://people.epfl.ch/maryna.viazovska?lang=en>