

## **Abstract**

Oberwolfach Workshop:

### **Automorphic Forms and Arithmetic**

Dates:

**30 Aug - 5 Sep 2020** (Code: 2036)

Organizers:

**Valentin Blomer, Bonn**  
**Emmanuel Kowalski, Zürich**  
**Philippe Michel, Lausanne**  
**Maryna Viazovska, Lausanne**

The workshop is at the interface of automorphic forms and analytic number theory. The aim is to disseminate, discuss and develop important new methods and results in the analytic theory of automorphic forms, in particular on higher rank groups, as well as their applications, arithmetic and otherwise.

The themes include, for instance, the study of various aspects of L-functions such as moments, reciprocity laws, and probabilistic aspects, counting problems with automorphic forms, applications of results of algebraic geometry to automorphic forms, as well as analytic aspects of automorphic forms over function fields, and applications of automorphic forms, especially in harmonic analysis.

The workshop will focus on some areas where new ideas are emerging:

- (1) moments of  $L$ -functions;
- (2) automorphic forms over function fields;
- (3) new relations with harmonic analysis and related areas.

In addition, other important problems such as the subconvexity and sup-norm problems will also be part of the program.