

# Algebra Seminar

**Speaker:**

**Mikhail Kotchetov  
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**Wednesday, March 19**

**1:00 p.m., HH-3017**

## **Classification of Semisimple Lie Algebras Over the Field of Real Numbers**

### **Abstract:**

The famous Killing-Cartan classification of semisimple Lie algebras over the field of complex numbers is one of the most beautiful pieces of modern algebra, which has inspired innumerable works in various branches of algebra as well as applications in differential geometry and mathematical physics. Yet it is the Lie algebras over the field of real numbers that arise as tangent algebras of Lie groups and hence are of special importance for applications. In this talk we will discuss the relationship between complex and real semisimple Lie algebras and outline the classification of the latter, which was accomplished by E. Cartan in 1914.