

## ***ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR***

**Speaker: Eugen Rogozinnikov**

**University of Strasbourg**



**Date:** Tuesday, March 29, 2022

**Time:** 2:00 PM

**Location:** 258 Hurley Hall

**Zoom URL:** NA

***Lecture Title:***

**Hermitian Lie groups as symplectic groups over noncommutative algebras**

***Abstract***

In my talk, I introduce the symplectic group  ${}_2(A, \sigma)$  over a noncommutative algebra  $A$  with an anti-involution  $\sigma$  and show that many classical Lie groups can be seen in this way. Of particular interest will be the classical Hermitian Lie groups of tube type and their complexifications. For these groups, I construct different models of the symmetric space in terms of the group  ${}_2(A, \sigma)$ . We obtain generalizations of several models of the hyperbolic plane and the three-dimensional hyperbolic space. This is a joint work with D. Alessandrini, A. Berenstein, V. Retakh and A. Wienhard.