

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

**Speaker: Anna Bot**  
**University of Basel**



**Date:** Wednesday, January 25, 2023

**Time:** 3:00 PM

**Location:** 258 Hurley Hall

**Zoom URL:** NA

### ***Lecture Title:***

**A smooth complex rational affine surface with uncountably many nonisomorphic real forms**

### ***Abstract***

A real form of a complex algebraic variety  $X$  is a real algebraic variety whose complexification is isomorphic to  $X$ . Many families of complex varieties have a finite number of nonisomorphic real forms, but up until recently no example with infinitely many had been found. In 2018, Lesieutre constructed a projective variety of dimension six with infinitely many nonisomorphic real forms, and this year, Dinh, Oguiso and Yu described projective rational surfaces with infinitely many as well. In this talk, I'll present the first example of a rational affine surface having uncountably many nonisomorphic real forms.