

## Dynamical Systems Seminar

**Date.** April 17th, 14h30 (Friday)

**Place.** Room FC1.031

**Speaker.** Udayan B. Darji (University of Louisville, USA)

**Title.** Shift operators and their classification

**Abstract.**

We introduce a class of linear bounded invertible operators on Banach spaces, called shift operators, which comprises weighted backward shifts and models finite products of weighted backward shifts and dissipative composition operators. We classify vast families of these shift operators, including the ones generated by orthogonal, diagonalizable, rotation or hyperbolic matrices. Our classification yields verifiable conditions which we use to construct concrete examples of shift operators with a variety of dynamical properties. As a consequence, we show that, for large classes of shift operators, generalized hyperbolicity is equivalent to the shadowing property. This is joint work with Maria Carvalho and Paulo Varandas.

There will be a coffee break after the seminar.