# Analysis Seminar

# Martingale Representation Theorem for Diffusions in Infinite Dimensional Spaces

**By**

**Uğur Aydın**
**(Bilkent)**

**Abstract:** In the first half of the talk, we give an introduction to the stochastic differential equations in infinite dimensional spaces.
In the second half the talk, we will utilize the associated martingale problems for stochastic differential equations to obtain a martingale representation theorem for processes that are adapted to the filtration generated by (weak) solutions to such an equation. Utilizing Malliavin derivative, under mild conditions we will give explicit integrand for such representations.

**Date:** Monday, January 17, 2022
**Time:** 18:00-19:00, GMT+3.
**Place:** ZOOM
To request the event link, please send a message to goncha@fen.bilkent.edu.tr