

# İTÜ



## MATHEMATICS

### SEMINAR

**Asist.Prof. Nazlı Doğan**  
**Nişantaşı University**

**Title:** Power Series Subspaces of Certain Nuclear Fréchet Spaces

**Abstract:** Power series spaces constitute an important and well-studied class in the theory of Fréchet spaces. Linear topological invariants  $\underline{DN}$  and  $\Omega$  are enjoyed by many natural Fréchet spaces appearing in analysis. In particular, spaces of analytic functions, solutions of homogeneous elliptic linear partial differential operator with their natural topologies have the properties  $\underline{DN}$  and  $\Omega$ . It is a well-known fact that the diametral dimension  $\Delta(E)$  and the approximate diametral dimension  $\delta(E)$  of a nuclear Fréchet space  $E$  with the properties  $\underline{DN}$  and  $\Omega$  are set theoretically between corresponding invariant of power series spaces  $\Lambda_1(\varepsilon)$  and  $\Lambda_\infty(\varepsilon)$  for some specific exponent sequence  $\varepsilon$ . This sequence is called associated exponent sequence of  $E$ . Coincidence of the diametral dimension and/or approximate diametral dimension of  $E$  with that of a power series space yields some structural results. In this talk, I first introduce the invariants which are mentioned above and the aim of this talk is to give some results about the structure of nuclear Fréchet space with the properties  $\underline{DN}$  and  $\Omega$ .

**Date: 31 March 2021 Wednesday**

**Seminar: 13:30-14:30**

**Place: Zoom**

**<https://itu-edu-tr.zoom.us/j/92147449283?pwd=b0hxTnBielRDNUx4RTNTa2kxdmk1Zz09>**

**Meeting ID: 921 4744 9283**

**Passcode: 793490**

**Contact: [kayah17@itu.edu.tr](mailto:kayah17@itu.edu.tr)**