



YEDİTEPE  
UNIVERSITY



## MATHEMATICS DEPARTMENT 25TH YEAR SEMINARS

---

# Counting lines, curves, planes... in algebraic varieties

Alexander Degtyarev

Bilkent University

**Abstract:** I will start from several classical but very simple, almost high school level, examples of algebraic varieties containing many lines, planes, etc. These varieties are very special, as a typical one from the same family would have no lines at all. This brings up a natural problem of finding the \*maximal\* possible number of lines, planes, etc. that can be contained in a member of a fixed family (say, hypersurfaces of a given dimension and degree). In general, this problem is wide open, but I will describe an approach that lets one attack it for a wide variety of seemingly unrelated families. Finally, if time permits, I will cite a few recent results.

---

**Date:** May 7, 2021; Friday

**Time:** 13:00

**Place:** Zoom



YEDİTEPE  
UNIVERSITY

