The course is intended for 3rd year undergraduate as well as M.Sc and Ph.D. students both in computer science and mathematics. We will touch main topics in the area of discrete geometry. Some of the topics are motivated by the analysis of algorithms in computational geometry, wireless and sensor networks. Some other beautiful and elegant tools are proved to be powerful in seemingly non-related areas such as additive number theory or hard Erdős problems. The course does not require any special background except for basic linear algebra, and a little of probability and combinatorics. During the course many open research problems will be presented.

Detailed Syllabus:


• Arrangements: Davenport Schinzel sequences and sub structures in arrangements. Geometric permutations.

• Geometric Ramsey and Turan type theorems: Application of Dilworth theorem, Erdos-Szekeres theorem for convex sets, quasi-planar graphs.
כמה תדרים שונים צריך על מנת להתחזק רשת סלולרית? 
בכמה צבעים ניתן לצבוע את המישור כך שכל שתי נקודות במרחק 1 
מקבלות צבע שונה? 
כמה אופיסים ניןleveland 2 נקודות במישורUBY צייר? 
מהו גrch "נ最大限度ים"? 

course title:
"גאומטריה קומבינטורית"  
201.2.0191 

מרצה: פרופסור שחר סמורודינסקי 

במסמטר בשתיעץ הבאומבייסיטו בק-גלורי
skirts ההלמידי שינה ומעلاء (באייזור המרצה)
הלמידי מוספס

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Topics that will be covered include:
- Fundamental theorems and basic definitions (convexity, Helly’s thm, Radon’s thm, Caratheodory thm, etc)
- Geometric graphs
- Coloring and hitting problems for geometric hypergraphs
- Arrangements : Davenport Schinzel sequences and sub structures in arrangements.
- Geometric Ramsey and Turan type theorems

לפרטים נ茆פם נין לעזר קשך עם המרצה בטל: 08-6461604 או בדואר shakhar@math.bgu.ac.il 

אלקטורים: 