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אוניברסיטת בן-גוריון בנגב
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פרופ' מרים כהן

ראש המרכז ללימודים מתקדמים במתמטיקה
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The Department of Mathematics and the Center of Advanced Studies in Mathematics announce a Mathematics Excellence Day

to honor 2022 Wolf prize laureate Prof. George Lusztig (MIT) and to award the Noriko Sakurai fellowship, the Gauchman excellence scholarship and the Zabey prize

Sunday, June 19 at 13:15 at the Deichmann building for Mathematics (58), Seminar room -101

Program:

13:15-14:15   Buffet Lunch

14:15   Opening remarks:

Prof. Miriam Cohen,
Director of the Center of Advanced Studies in Mathematics

Prof. Daniel Sternheimer,
Rikkyo (Japan) and Bourgogne (France) Universities

Dr. Ruth Blatt, on behalf of Gauchman family

Ms. Reut Inon-Berman, the director general of the Wolf Foundation

14:30   Honorary lecture:

Prof. George Lusztig, MIT, the winner of The Wolf Prize in Mathematics ,2022
Title: "Weyl's dimension formula, revisited."
Abstract: Let G be a compact connected Lie group. The irreducible representations of G were classified by E.Cartan; their character and dimension were described by H.Weyl. The formula of Weyl expresses the dimension as a quotient of two integers ,the result being not obviously an integer. A later formula of Kostant expresses the dimension as a difference of two integers, the result being not obviously positive. We will describe a third formula in which the result is a positive integer.

15:30   **Dr. Inna Entova-Aizenbud, Introducing the recipient of the Noriko Sakurai prize**

15:35   **The 2022 Noriko Sakurai fellowship award and a lecture**
by *Dr. Alexander Charles Sherman*, recipient of the Noriko Sakurai fellowship
Title: Representation theory of supergroups: analogies with modular representation theory
Abstract: We introduce the general linear supergroup over the complex numbers, along with its category of representations. Although this category is very complicated, analogies may be drawn between it and the categories of representations of complex reductive groups, and of finite groups in positive characteristic. We discuss recent successes in pushing the boundaries of the latter analogy, and some consequences. The main tools come from both algebraic and differential supergeometry, which we will hint at.

15:45   **Prof. Daniel Berend, Introducing the recipient of the Hillel Gauchman fellowship**

15:50   **The 2022 Hillel Gauchman excellence scholarship and a lecture**
by *Ms. Dina Barak*, recipient of the Hillel Gauchman fellowship
Title: The Coupon Collector's Problem -- Applications
Abstract : Our starting point is the coupon collector's problem (CCP). Its formulation is as follows: How many drawings are needed on average in order to complete a collection of n types of coupons, if at each step a single coupon is drawn uniformly randomly, independently of all the other drawings?
We have studied generalizations and applications of CCP in cyber security.
We have also studied simulating the process rapidly.

16:00   **Prof. Eitan Sayag, Introducing Mr. Guy Shtotland, the recipient of the Zabey prize**

16:05   **a lecture by Mr. Guy Shtotland**

You are cordially invited

Professor Miriam Cohen and Professor Amnon Besser