קולוקוויום

ההרצאה

groups random of varieties Character

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תקציר: The space Hom(\Gamma,G) of homomorphisms from a finitely-generated group \Gamma to a complex semisimple algebraic group G is known as the G-representation variety of \Gamma. We study this space when G is fixed and \Gamma is a random group in the few-relators model. That is, \Gamma is generated by k elements subject to r random relations of length L, where k and r are fixed and L tends to infinity.

More precisely, we study the subvariety Z of Hom(\Gamma,G), consisting of all homomorphisms whose images are Zariski dense in G. We give an explicit formula for the dimension of Z, valid with probability tending to 1, and study the Galois action on its geometric components. In particular, we show that in the case of deficiency 1 (i.e., k-r=1), the Zariski-dense G-representations of a typical \Gamma enjoy Galois rigidity.

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