ALEXANDER AND MARKOV THEOREMS FOR DOODLES ON SURFACES

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ABSTRACT. Study of certain isotopy classes of a finite collection of immersed circles without triple or higher intersections on closed oriented surfaces can be thought of as a planar analogue of virtual knot theory where the genus zero case corresponds to classical knot theory. Alexander and Markov theorems for the genus zero case are known, where the role of groups is played by twin groups, a class of right-angled Coxeter groups with only far commutativity relations. In the talk, Alexander and Markov theorems for higher genus case, where the role of groups is played by a new class of groups called virtual twin groups, will be discussed. This work is in collaboration with Dr Mahender Singh.