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Knot concordance and 4-manifolds

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Abstract. There is a rich interplay between the fields of knot theory and 3- and 4-manifold topology. In this talk, I will describe a weak notion of equivalence for knots called concordance, and highlight some historical and recent connections between knot concordance and the study of 4-manifolds, with a particular emphasis on applications of knot concordance to the construction and detection of small 4-manifolds which admit multiple smooth structures.