Quandle cocycle invariants of Lefschetz fibrations over the 2-sphere

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Abstract. We introduce quandle cocycle invariants of 4-dimensional Lefschetz fibrations over the 2-sphere, using quandle cocycles of Dehn quandles with non-abelian coefficients. In this talk, we first review a topological interpretation of quandle 2-cocycle invariants for links in S^3 shown by M. Eisermann. We next present a 2-cocycle so that the associated invariant is equivalent to the signature of 4-dimensional manifolds.