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David Nadler* (nadler@math.northwestern.edu), Department of Mathematics, Northwestern University, 2033 Sheridan Road, Evanston, IL 60208. *Representation theory via topological field theory.*

This will be an informal introduction to topological field theory and its applications to representation theory. I will explain some of the beautiful simple ideas behind topological field theory, and then discuss examples of its role in the study of finite groups, Lie groups, loop groups, and knots. Time permitting, I will try to give a rough idea of the subject at the center of the interplay between representation theory and topological field theory, the Geometric Langlands Program. (Received August 24, 2008)