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**Kiran S. Kedlaya\*** ([kedlaya@ucsd.edu](mailto:kedlaya@ucsd.edu)). *Sato-Tate groups of motives.*

The Sato-Tate group of a motive defined over a number field is a compact Lie group whose construction is closely related to the Mumford-Tate group and the motivic Galois group. It may be thought of as an analogue of the  $\ell$ -adic monodromy group for an “arithmetic family”, where what varies is the choice of a prime ideal rather than a fibre of a geometric morphism, and the analogue of Deligne’s equidistribution theorem is the generalized Sato-Tate conjecture. We discuss the problem of the classification of possible Sato-Tate groups of 1-motives associated to abelian varieties (especially in dimensions 2 and 3) and some other cases. Includes joint work with Francesc Fité, Víctor Rotger, and Andrew Sutherland. (Received February 01, 2013)