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*Combinatorics of unitary matrices*

The combinatorial structure of orthogonal matrices is a topic of study that remained dormant for many years after the first independent stubs by Fiedler, Brualdi, et al., from the mathematics community; by Lande and Louck, from the physics community. This was the area that I chose for my Ph.D. research. I will survey what we have done so far, why we should be interested in the topic and what we should do next.