

6. Is there a topological realization of Dye's Theorem?

That is, suppose we are given ergodic invertible measure-preserving systems  $(S_1, m_1)$  and  $(S_2, m_2)$ .

Are there homeomorphisms  $S$  and  $T$  with the same orbits on a compact metric space  $X$ , and a Lebesgue probability  $m$  with support on  $X$ , such that

(i)  $(S, m)$  and  $(S_1, m_1)$  are isomorphic, and

(ii)  $(T, m)$  and  $(S_2, m_2)$  are isomorphic?

## References

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