On Exact Solutions of Novel Multistate Landau-Zener Problems.[1]
ANIKET PATRA, EMIL YUZBASHYAN, Rutgers University — A multistate
Landau-Zener (MLZ) Hamiltonian is used to model numerous non-equilibrium ex-
periments involving cold atoms, quantum dots and quantum dot molecules. We
recently showed that all the known MLZ problems either reduce to the 2×2 Landau
Zener problem or belong to a family of mutually commuting Hamiltonians (that are
polynomial in time).[2] Based on this classification we identify previously unknown
MLZ problems, explicitly obtain their solutions and discuss relevant experimental
scenarios.

ANIKET PATRA
Rutgers Univ