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The tortoise method and a new linear algorithm for rainbow meanders

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The 1991 groundbreaking work of Fusco and Rocha “A permutation related to the dynamics of a scalar parabolic PDE” shows the close relation of detailed dynamics of *Sturm global attractors* with *open meanders configurations*. The 2012 joint work with Bernd Fiedler shows the strict relation between a variant of *closed meanders* and *Cartesian billiards*. Another few works relate *Temperley-Lieb algebras* and several other objects from diverse areas of mathematics. In this work I will present another two approaches: one is a geometrical algorithm with log-complexity, the second one presents a strong matrix structure that we can analyse, however it is linear.