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Paul W Eloë* (Paul.Eloe@notes.udayton.edu), Department of Mathematics, University of Dayton, Dayton, OH 45469-2316. *Descartes systems of functions and disconjugacy of linear fractional differential equations.*

An n th order homogeneous linear ordinary differential equation is disconjugate on an interval if a solution has n roots, counting multiplicities, implies the solution is trivial. There is a rich theory of disconjugacy of ordinary differential equations which includes the equivalence of the existence of a Descartes system of solutions. We study the role of Descartes systems of solutions of a linear fractional differential equation and initiate an analogous development of disconjugacy of linear fractional differential equations. (Received September 27, 2005)