1135-12-1941   **Carlos E. Arreche*** (`arreche@utdallas.edu`). *Differential Galois theory for difference equations and hypertranscendence.*

There is a differential Galois theory that associates to a given linear difference equation a geometric object, called the Galois group, that encodes the differential equations satisfied by the solutions. I will describe this Galois theory and some algorithms that have been used recently to prove that certain generating series arising in combinatorics are hypertranscendental. (Received September 25, 2017)