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Erdal Imamoglu* (eimamog@ncsu.edu), Department of Mathematics, North Carolina State University, Box 8205, Raleigh, NC 27695, and **Mark van Hoeij**. *On Standard Forms of Linear Ordinary Differential Equations with Rational Function Coefficients.*

In this presentation we will introduce the standard form of a linear ordinary differential equation (LODE) with rational function coefficients and will give a fast algorithm to find it. The crucial step to find the standard form of a LODE is to compute an integral basis, which is also normalized at the point at infinity, for the LODE. Since the standard form of a LODE is unique up to a differential isomorphism, our algorithm proposes a new method to classify LODEs with rational function coefficients. (Received September 13, 2017)