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Andrei Minchenko* (andreim@math.cornell.edu), Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14853, and **Alexey Ovchinnikov**. *Zariski closures of linear differential algebraic groups*.

Linear differential algebraic groups appear as Galois groups of systems of linear differential equations with parameters. These groups measure differential algebraic dependencies among solutions of such equations. As in other Galois theories, various properties of such groups determine the corresponding properties of the solutions. We will discuss how computing the Zariski closures of linear differential algebraic groups can exhibit their properties considering the classes of simple and reductive linear differential algebraic groups. (Received September 20, 2009)