1100-37-178   **Vladimir Dragovic***, University of Texas at Dallas, 800 West Campbell Rd., FO 35, Richardson, TX 75080. *Discriminantly separable polynomials and integrable dynamical systems.*

The class of discriminantly separable polynomials as a distinguished class of polynomials has been introduced and studied by the author some years ago [1]. It appeared in the context of the celebrated Kowalevski top. Very recently, in joint efforts with Katarina Kukic, such polynomials were classified in the case of three variables. There is a subtle connection between the classification of the polynomials and the classification of pencils of conics. Different integrable dynamical systems, both continuous [2] and discrete, can be related with the discriminantly separable polynomials of three variables.

[1] Dragović, Vladimir: Geometrization and generalization of the Kowalevski top. Comm. Math. Phys. 298 (2010), no. 1, 37–64.

[2] Dragović, Vladimir; Kukić, Katarina: New examples of systems of the Kowalevski type. Regul. Chaotic Dyn. 16 (2011), no. 5, 484–495 (Received February 07, 2014)