1086-12-368 **Martin Juras*** (martinj@qu.edu.qa), Department of Mathematics, College of Arts and Sciences, P O Box 2713, Qatar University, Doha, 2713, Qatar. *Irreducibility criteria for polynomials and linear transformations.*

Eisenstein, Eisenstein-Dumas, Scönemann, Stepanov-Schmidt irreducibility criteria and Newton polygon methods are all special cases of Newton polytopes method. Many irreducible polynomials may be detected by some of these criteria, only after certain linear change of variables. The author discovered that the search for this change of variables in case of Eisenstein and Eisenstein-Dumas criteria may be significantly simplified by looking at a certain "normal" form of the polynomial in question. This was proven for polynomials over unique factorization domains. Recently, Bishnoi and Khanduja (2010) extended this result to valued fields with arbitrary rank. For projective transformations, things get a little bit more complicated. (Received August 26, 2012)