

1096-65-1370

Wenyuan Wu (wuwenyuan@cigit.ac.cn) and **Zhonggang Zeng*** (zzeng@neiu.edu),
Department of Mathematics, Northeastern Illinois University, Chicago, IL 60625. *The numerical factorization of polynomials.*

Polynomial factorization is a basic algebraic operation and an enduring subject of study in computer algebra. In contrast to the conventional symbolic factorization, the objective of numerical factorization is to calculate irreducible factors accurately from empirical data using floating point arithmetic. This talk presents the formulation and fundamental theorems of the numerical factorization as well as an algorithmic framework. Implementation, software and computing experiment will also be discussed. (Received September 15, 2013)