

Solving parametric polynomial systems using generic Rational Univariate Representation

Corniquel Florent
IMJ-PRG and INRIA Paris, France

30th Applications of Computer Algebra - ACA 2025

Given $f_1, \dots, f_n \in \mathbb{Q}[W, X]$ where $W = [W_1, \dots, W_s]$ is a list of parameters and $X = [X_1, \dots, X_n]$ a list of indeterminates, we propose an extension of the Rational Univariate Representation (RUR) to parametric systems that are zero-dimensional for almost all values of parameters.