Rational pull-back transformations for algebraic Painlevé VI solutions

Abstract:

Pull-back transformations of hypergeometric differential equations gives us all second order ordinary differential equations, as Felix Klein famously proved. More broadly, special pullback transformations of the hypergeometric equation can generate algebraic solutions of Painleve equations. This possibility was investigated already by Richard Fuchs. The approach was recently revived or rediscovered by Yousuke Ohyama and Alexander Kitaev. The talk presents details of explicit construction of appropriate pullback transformations for algebraic Painleve VI solutions.