

**A truncated Painlevé expansion associated with
the Tzitzéica equation:
Consistency and general solution**

SERGEY V. MELESHKO

*School of Mathematics, Suranaree University of Technology, Nakhon Ratchasima,
30000, Thailand*

email: sergey@math.sut.ac.th

W.K. SCHIEF

*School of Mathematics, The University of New South Wales,
Sydney, NSW 2052, Australia*

Abstract

It is shown that the overdetermined system obtained by truncating a Painlevé expansion for solutions of the classical Tzitzéica equation may be reduced to a compatible Frobenius system. Its general solution is expressed in terms of solutions of the standard linear representation of the Tzitzéica equation.