

Computer Proofs of Identities Using CAS

Maria G. Karatopraklieva

Sofia University “St. Kliment Ohridski”

Abstract

The talk is about the studying of special functions and hypergeometric summation algorithms at the Seminar on Computer Algebra, Special Functions and Orthogonal Polynomials for undergraduate students at the Faculty of Mathematics and Informatics of Sofia University. Maple implementations of Gosper and Zeilberger algorithms can give computer proofs to various identities and can be used to calculate complicated sums. Preparing short talks, the students become interested in topics which help them to find out a beneficial relation between Mathematics and CAS.