

Contents

1	Introduction	4
1.1	Stiff systems	4
1.2	Stiffness Detection Methods	5
1.3	Solving Stiff Systems	6
1.4	Implementation issues	8
2	Modern Taylor Series Method	10
2.1	TKSL/386	11
3	Goals	12
4	Test Examples	13
5	Detecting Stiff Systems Using Modern Taylor Series Method	14
6	Adaptation of Modern Taylor Series Method for Stiff Systems	17
6.1	High-order MTSM and Multiple Word Arithmetics	17
6.2	Implicit MTSM	21
6.3	Outline of the Suggested iMTSM Algorithm	23
7	Conclusions	25
8	Přehled	26
	Author's C.V.	30