

Table of Contents

Krzysztof Bartoszek, Michał Krzemiński and Jarosław Skokowski: Survival time prognosis under a Markov model of cancer development	6
Natalia Bielczyk, Marek Bodnar, Urszula Foryś and Jan Poleszczuk: Delay can stabilise: love affairs dynamics	12
Marek Bodnar and Agnieszka Bartłomiejczyk: Delay induced oscillations in gene expression of Hes1 protein model	18
Joanna Chrobak and Henar Herrero: A model of competition with three asymptotic states	24
Antoni Leon Dawidowicz and Jerzy Leszek Zalaśiński: Mathematical model of bioenergetic processes in green plants	30
Michał M. Dyzma, Piotr Szopa and Bogdan Kaźmierczak: Membrane associated complexes: new approach to calcium dynamics modeling	35
Urszula Foryś and Monika Joanna Piotrowska: MGs immunotherapy: simplified model with delays	41
Joanna Jaruszewicz, Paweł Żuk and Tomasz Lipniacki: Probability density functions in bistable gene activation model with two types of noise	47
Roman Jaksik and Joanna Rzeszowska-Wolny: Prediction of regulatory elements in DNA using position weight matrix models	53
Bogdan Kaźmierczak: Mechanical effects coupled with calcium waves	59
Paweł Kocieniewski and Tomasz Lipniacki: The interplay of double phosphorylation and scaffolding in the MAPK pathways	65
Jakub Kowalski and Stanisław Cebzat: Evolution of the recombination rate distribution along chromosome in Penna model	71
Urszula Ledzewicz and Heinz Schättler: On a mathematical model of combined anti-angiogenic and radiotherapy treatment	76
Grzegorz Ołoś, Volodymyr G. Zinkovsky, Maksym Zhuk and Olga V. Zhuk: A molecular model and A method of isodynamic analysis of COMBINED effects of constant xenobiotic concentrations	82
Jan Poleszczuk and Urszula Foryś: Derivation of the Hahnfeldt et al. model (1999) revisited	87
Przemysław Sypka: Premises to model wind velocity within stem layer of Istebna spruce stand	93
Andrzej Świerniak and Michał Krześlak: Game theoretic approach to mathematical modeling of radiation induced bystander effect	99
Krzysztof Topolski: Markov processes on p-adics and hierarchical system dynamics	105

Volodymyr G. Zinkovsky, Olga V. Zhuk, Grzegosz Ołoś, Maksym Zhuk: Dynamic modelling of xenobiotic action on organism using parameters of lethal toxic effect	111
Bartosz Ziółko, Jakub Gałka, Dawid Skurzok and Tomasz Jadczyk: Modified weighted Levenshtein distance in automatic speech recognition	116
Paweł Żuk and Tomasz Lipniacki: Probability density functions in bistable kinase activation model	121
Spis autorów	127