

## Control and Cybernetics

vol. **51** (2022) No. 4

pages: 327-341

DOI: 10.2478/candc-2022-0020

---

### CONTENTS

---

NAZIH ABDERRAZZAK GADHI AND AISSAM ICHATOUHANE: Optimality conditions in set-valued optimization using approximations as generalized derivatives	425
STEPAN A. ROGOV, ILIA S. SOLDATENKO AND ALEXANDER V. YAZENIN: On the quasi-efficient frontier of the set of optimal portfolios under hybrid uncertainty with short sales allowed	445
PRZEMYSŁAW JUSZCZUK AND LECH KRUSI: Fuzzy trading system on the forex market for deriving the portfolio of instruments	467
HONORATA SOSNOWSKA: Transformation into anti-manipulation method in voting. Changes in properties	487
LESZEK KLUKOWSKI: Estimating and testing relations and trees on the basis of pairwise comparisons	501
RADOSŁAW MARŁĘGA AND JERZY R. TCHÓRZEWSKI: Hourly identification and simulation of the TGE S.A. Day-Ahead Market system	523

DARIUSZ RUCIŃSKI: Neural modelling of prices on the Day-Ahead Market at the Polish Power Exchange supported by an evolutionary algorithm and inspired by quantum computing	557
Table of Content of Volume 51	585
List of Authors of Volume 51	589
List of Referees of Volume 51	591