

# ACTA TECHNICA

Volume 63 (2018), Number 4

## CONTENTS

RADEK PIVOKONSKY, PETR FILIP, GRIGORII V. PYSHNOGRAI: On the reduction of nonlinear parameters in the eXtended Pom-Pom differential constitutive model . . . . .	501–516
TAMAZ MORCHADZE, NUNU RUSADZE, ALEKSANDRE SHERMAZANASHVILI: Analysis and identification of ways to improve efficiency of martensitic engines of various schemes . . . . .	517–528
V. VIJAYASARO, S. NITHYANANDAM, N. PARVATHAM: A novel development of wireless mesh protocol data transmission framework for internet-based energy conservation . . . . .	529–536
D. PODOPRIGORA, I. RAUPOV: Research of the influence of polymeric drilling mud on the filtration-capacitive properties of polymictic sandstones . . . . .	537–546
O. ZHORTUYLOV, V. SOLDATOV, G. ZHUMATAY, U. BEKENOV, A. ZHORTUYLOV, S. ZHUMABAEV: Parameters and operating modes of the working organs of the machine for harvesting forage grass seeds by comb on the root . . . . .	547–554
N. V. KANDAUROVA, V. V. CHEKANOV, V. S. CHEKANOV: Effect of a near-surface nanolayer formation on the magnetic fluid electrical properties . . . . .	555–562
SLAVA MEBONIA, TAMAZ MORCHADZE, NUNU RUSADZE: Method of determination of parameters of impact interaction by using phenomenological models . . . . .	563–572
SHIHENG WANG, SHIDONG DAI, KE WANG: Finite-time convergence of gradient-based neural network for solving Lyapunov matrix equation . . . . .	573–586
QIANG LI, XIAOFENG LIU: The analysis of high-strength concrete slump and strength based on GA-SVM . . . . .	587–600
ZHANG SHI-JIE, SHI QING-SHENG, CAO YI: Cooperative localization approach for multi-robot systems based on state estimation error compensation . . . . .	601–612
H. S. JAMAAT, Y. A. BEROMI, M. HAJIVAND: Raising reliability and reducing power loss of power distribution network by determining optimal location and size of capacitor banks . . . . .	613–624
MOHSEN IRANI, FARAMARZ SARHADDI, AMIN BEHZADMEHR: Numerical investigation of the effect of nanoparticles on thermal efficiency of phase change materials . . . . .	625–632
RAMIN SAYADI, SAJAD NOSRATIAN, ANITA HATAMIAN: A method of reducing the interference of signals in MIMO technology . . . . .	633–640

ACTA TECHNICA 63 (2018), No. 4

# ACTA TECHNICA

Volume 63 (2018), Number 4

ISSN 0001-7043



Institute of Thermomechanics CAS, v.v.i.