

## CONTENTS

### ELECTRONICS TECHNOLOGY

- 365 **Phase noise filtering and phase unwrapping method based on unscented Kalman filter**  
Xianming Xie and Yiming Pi
- 373 **Modeling of terahertz pulse generation from LT-GaAs ultrafast photoconductive switches**  
Zhe Ma, Hongmei Ma, Chuntao Yang, and Keming Feng
- 381 **Polyphase coded signal design for MIMO radar using MO-MicPSO**  
Xiangneng Zeng, Yongshun Zhang, and Yiduo Guo
- 387 **Improved STAP algorithm based on APES**  
Yan Zhang, Yunhua Zhang, and Xiang Gu
- 393 **Blind identification and DOA estimation for array sources in presence of scattering**  
Ying Xiong, Gaoyi Zhang, Bin Tang, and Hao Cheng

### DEFENCE ELECTRONICS TECHNOLOGY

- 398 **Ultrawide-band radar imagery from multiple incoherent frequency subband measurements**  
Xiaojian Xu and Jia Li
- 405 **QPSO-based algorithm of CSO joint infrared super-resolution and trajectory estimation**  
Liangkui Lin, Hui Xu, Dan Xu, Wei An, and Kai Xie
- 412 **3D motion and geometric information system of single-antenna radar based on incomplete 1D range data**  
Yingkang Zhang, Yang Xiao, and Shaohai Hu
- 421 **High resolution range profile analysis based on multicarrier phase-coded waveforms of OFDM radar**  
Kai Huo, Bin Deng, Yongxiang Liu, Weidong Jiang, and Junjie Mao

### SYSTEMS ENGINEERING

- 428 **Health management based on fusion prognostics for avionics systems**  
Jiuping Xu and Lei Xu
- 437 **Simulation-based automatic generation of risk scenarios**  
Jinghui Li, Rui Kang, Ali Mosleh, and Xing Pan

- 445 Improved unequal interval grey model and its applications**  
Yuhong Wang, Yaoguo Dang, and Xujin Pu
- 452 Adaptive support vector machine decision feedback equalizer**  
Sumin Zhang, Shu Li, and Donglin Su
- 462 Heuristic algorithms for scheduling on uniform parallel machines with heads and tails**  
Kai Li and Shanlin Yang
- 468 Group decision-making method based on entropy and experts cluster analysis**  
Xuan Zhou, Fengming Zhang, Xiaobin Hui, and Kewu Li

#### **CONTROL THEORY AND APPLICATION**

- 473 Robust fuzzy control of Takagi-Sugeno fuzzy neural networks with discontinuous activation functions and time delays**  
Yaonan Wang, Xiru Wu, and Yi Zuo
- 482 Stability analysis and stabilization for discrete-time singular delay systems**  
Xin Sun, Qingling Zhang, Chunyu Yang, and Zhan Su
- 488 Modified wavelet filtering algorithm applied to gyro servo technology for the improvement of test-precision**  
Yanbo Li, Yu Liu, Baoku Su, and Yansong Jiang
- 493 Stability analysis and design of time-delay uncertain systems using robust reliability method**  
Shuxiang Guo
- 500 Adaptive neural control for a class of uncertain stochastic nonlinear systems with dead-zone**  
Zhaoxu Yu and Hongbin Du
- 507 Application of quantum neural networks in localization of acoustic emission**  
Aidong Deng, Li Zhao, and Wei Xin
- 513 Novel approach to GPS/SINS integration for IMU alignment**  
Wei Sun and Feng Sun

#### **SOFTWARE ALGORITHM AND SIMULATION**

- 519 Anonymous multipath routing protocol based on secret sharing in mobile ad hoc networks**  
Siguang Chen and Meng Wu
- 528 Color reproduction for noisy CFA data using directional cycle-spinning**  
Weiyu Yu, Jing Tian, and Yonghao Xiao
- 534 Fast consensus seeking for multi-agent systems**  
Yingying She and Huajing Fang
- 540 Improved genetic algorithm for nonlinear programming problems**  
Kezong Tang, Jingyu Yang, Haiyan Chen, and Shang Gao