

## CONTENTS

EDITORIAL .....	175	
<i>Alexander Fradkov</i>		
About the 11th International Conference on Physics and Control .....	175	
PAPERS PRESENTED AT PhysCon 2024 .....		179
<i>Andrey V. Ankilov, Petr A. Velmisov, and Yuliya A. Tamarova</i>		
Mathematical models of system of measure of pressure variation in combustion chambers of engines .....	179	
<i>Sergey Borisenok</i>		
On feedback control algorithms for nitrogen-vacancy-cavity quantum sensing .....	187	
<i>Sergey Borisenok and Elena Gogoleva</i>		
Speed gradient control over qubit states .....	193	
<i>Andrei V. Bukh, Nataliya N. Nikishina, Eugene M. Elizarov, and Galina I. Strelkova</i>		
Interaction of travelling waves in multilayer networks .....	197	
<i>Denis S. Goldobin</i>		
Interspike interval statistics for quadratic integrate-and-fire neurons subject to alpha-stable noise .....	206	
<i>Margarita A. Kovaleva and Valeri V. Smirnov</i>		
Anti-resonance in the systems of nonlinear oscillators .....	211	
<i>M. Simonyan, E. Drozhdeva, M. Zhuravlev, A. Selskii, and Y. Zhuravleva</i>		
Identification of variations in time frequency characteristics of sleep stages for humans with different chrono-types .....	220	
<i>M. Simonyan, L. Konshina, N. Akimova, M. Zhuravlev, and A. Runnova</i>		
Synchronization in electrical activity signals of the brain and cardiovascular system during nocturnal sleep in obstructive sleep apnea .....	228	
<i>Polnia Tkachenko and Dmitry Balandin</i>		
Optimal control of coupled buildings under seismic excitation .....	234	

REGULAR PAPERS .....	241
<i>Alexander Arguchintsev and Daniil Kopylov</i>	
Numerical optimization of separation processes in a distillation column .....	241
<i>Sanjay Kumar and Lillie Dewan</i>	
Trajectory tracking controller design for quadcopter under disturbances environment: using a hybrid approach .....	248
<i>Boris Melnikov and Tatiana Lysak</i>	
On some algorithms for comparing models of femtosecond laser radiation propagation in a medium with gold nanorods .....	261