

## CONTENTS

<i>Daria Arslanova, Elena Gaponok, Nikita Knyazev, Vladimir Kukhtin, Eugeny Lamzin, Anatoly Makarov, Andrey Nezhentzev, Nikolai Shatil, Natalia Znamenshchikova, Alexander Ovsyannikov, Dmitri Ovsyannikov, and Sergey Sytchevsky</i> Modelling pm dipoles with longitudinal field gradient for sila facility .....	99
<i>Van Vinh Dang, Boris Melnikov, and Svetlana Korabelshchikova</i> On separability of semigroups: application to models of physics and discrete optimization .....	103
<i>Irina Khrustaleva, Michail Khrustalev, Yana Brovkina, Vladimir Khokhlovskiy, and Vyacheslav Shkodyrev</i> The model for optimizing cutting parameters for processing products on metal-cutting machines .....	111
<i>Alexander Kolinichenko</i> The effect of diffusion on multistability and stochastic sensitivity in spatially extended systems .....	123
<i>Pham Cong Thang, Tran Thi Thu Thao, Huynh Duc Anh Bao, Nguyen Quoc Cuong, and Nguyen Tien Hung</i> CT image reconstruction: integrating iterative methods with MI-EM algorithm and deep learning models ..	130
<i>Arpit Sharma and Jagdeep Singh Lather</i> Synchronization of coupled quadcopters using contraction theory .....	142
<i>Siddhartha Sharma and Renugadevi N</i> Survey of encoding techniques for quantum machine learning .....	152
<i>Hung Le Viet, Han Le Hoang Ngoc, Khoa Tran Dinh Minh, and Son Than Van Hong</i> A deep learning framework for gym-gesture recognition using the combination of transformer and 3D pose estimation .....	161