

# Table of Contents

## CONSTRUCTION AND ARCHITECTURE

|  |    |
|--|----|
| <i>M. V. Novikov, O. A. Sotnikova, A. N. Goikalov</i><br>Bearing capacity of complex structures<br>of cellular concrete .....  | 5  |
| <i>M. V. Rubtsova, E. E. Semenova</i><br>Accounting for the influence of the building shape<br>on its energy efficiency.....   | 10 |
| <i>S. S. Rekunov, A. Yu. Kosova, S. Yu. Ivanov, I. S. Zavyalov</i><br>Calculation of a multi-storey building<br>for progressive collapse under seismic impact .....  | 15 |
| <i>K. G. Kondrashin, V. N. Piliipenko, E. M. Golubnischeva</i><br>Methods of thermal strengthening of soils .....  | 20 |
| <i>V. Yu. Belousova, N. V. Kondakova,<br/>S. N. Reznikova, N. S. Serpokrillov</i><br>Experimental studies of biochemical gas treatment<br>in the working area<br>of closed wastewater treatment plants .....   | 25 |
| <i>N. M. Rashevskiy, N. P. Sadovnikova,<br/>T. V. Yereshchenko, M. A. Kulikov</i><br>Formulation of the decision-making problem<br>for management<br>of mobile air quality monitoring stations .....           | 28 |
| <i>O. M. Shentsova, I. V. Besedina, S. V. Bulycheva</i><br>Development of interest in professional training<br>at the university among future architects and designers<br>at the current stage.....            | 33 |
| <i>E. V. Alzemeneva, Yu. V. Mamaeva</i><br>Identity of the urban environment .....   | 40 |
| <i>A. E. Tkachuk, O. A. Sotnikova, A. N. Goykalov</i><br>The method for evaluation of the characteristics<br>of architectural lighting of buildings.....   | 47 |
| <i>N. A. Novinskaya, A. I. Kuzyakina</i><br>Principles of structural organization and composition<br>in music and architectural environment .....  | 53 |
| <i>V. S. Salakhutdinova, N. A. Novinskaya</i><br>Empirical features of perception<br>of architectural space and form.....  | 58 |
| <i>A.V. Isanova, D.A. Drapalyuk,<br/>D.A. Degtyareva, D.V. Kirichenko</i><br>BIM-modelling tools<br>for the management and maintenance<br>of energy-efficient buildings and facilities<br>in urban areas ..... | 62 |
| <i>F.Y. N. Alexandrova, T. O. Tsitman</i><br>Modern trends in the transformation of the city .....   | 67 |

## COMPUTER SCIENCE, COMPUTER ENGINEERING AND MANAGEMENT

|   |    |
|---|----|
| <i>M. F. Petrov, S. V. Okladnikova</i><br>Reengineering of the electronic document<br>management system at the oil and gas enterprise<br>«LUKOIL-NIZHNEVOLZHSKNEFT» ..... | 72 |
| <i>A. K. Baibulov, N. V. Ivanitskaya</i><br>Influence of ribbing on the stress-strain state<br>of a flat round tank bottom.....   | 77 |
| <i>A. V. Yershov, V. B. Korobko, I. M. Zheleznicenko,<br/>E. N. Kiyatkina, I. O. Voropaev</i><br>Prevention of problematic situations<br>in the field of fire safety..... | 80 |
| <i>S. I. Noskov, A. A. Butin</i><br>Discrete model of housing construction<br>in the russian federation.....  | 87 |

## SAFETY OF HUMAN ACTIVITIES

|  |     |
|--|-----|
| <i>D. S. Romanyuk, E. V. Klimova</i><br>Mechanization of soft roof installation processes<br>as a solution for reducing industrial injuries .....  | 90  |
| <i>D. A. Bagdadyulyan, G. B. Abuova, A. M. Kapizova</i><br>The main features of the organization<br>of extinguishing landscape fires<br>in the arid zone of russia<br>on the example of the Astrakhan region ..... | 94  |
| <i>A. P. Parfyonenko, A. B. Timofeev</i><br>Problems of fire-fighting distance on the territory<br>of multi-fuel filling stations .....  | 99  |
| <i>E. A. Bakulenko, A. P. Parfenenko</i><br>Problems of designing safety zones for people<br>with limited mobility .....   | 103 |
| <b>CONGRATULATIONS.....</b>  | 109 |
| <b>SCIENTIFIC LIFE .....</b>   | 109 |
| <b>OUR AUTHOR.....</b>   | 110 |
| <b>INFORMATION FOR AUTHORS.....</b>  | 112 |