

CONTENTS

NON-DESTRUCTIVE MICRO-CALORIMETRY MONITORING OF MATERIAL EVOLUTION Vít Šmilauer, Jiří Hošek.....	7
APPLICATION OF FREEZING IN TUNNEL CONSTRUCTION Šárka Pešková, Petr P. Procházka.....	13
EXPERIMENTAL BOND STRENGTH DETERMINATION OF GFRP BARS AND CONCRETE Jindřich Fornůsek, Petr Konvalinka, Radoslav Sovják, Jan L. Vítek.....	17
INFLUENCE OF TEMPERATURE LOADING ON STRUCTURAL DEFECTS Petr Fajman.....	21
INFLUENCE OF PROPERTIES OF WATER VAPOUR RETARDER ON HYGROTHERMAL PERFORMANCE OF SANDSTONE WALL PROVIDED WITH INTERIOR THERMAL INSULATION Václav Kočí, Jiří Maděra, Robert Černý.....	27
CHEMICAL DETERIORATION OF FIBER REINFORCED CEMENTITIOUS MATRIX Jiří Němeček, Petr Kabele, Luboš Kopecký.....	35
RECONSTRUCTION OF MICROSTRUCTURE OF CEMENT PASTE USING IMAGE ANALYSIS Jiří Němeček, Kateřina Forstová.....	41
DESTRUCTIVE METHODS IN TESTING OF THE MATERIAL PROPERTIES OF CONCRETE Pavel Padevět.....	47
HOMOGENEOUS APPROACH FOR MODELING OF FRESH CONCRETE FLOW Bořek Patzák, Daniel Ryppl, Jaroslav Kruis.....	49
PARAMETER IDENTIFICATION AT THE COUPLED WATER AND SALT TRANSPORT IN POROUS MATERIALS Zbyšek Pavlík, Lukáš Fiala, Jiří Maděra, Milena Pavlíková, Robert Černý.....	55
EFFECT OF SILICATE PROTECTION LAYERS ON DURABILITY PROPERTIES OF FINE GRAINED CONCRETE Milena Pavlíková.....	61
FAST ESTIMATION OF THE RECTANGULAR FOOTINGS INFLUENCE ZONE DEPTH Pavel Kuklík, Marie Kopáčková, Miroslav Brouček.....	67
CONCRETE STRUCTURES WITH NON-METALLIC REINFORCEMENT Radoslav Sovják, Petr Konvalinka, Jan L. Vítek.....	73
GEOMETRICAL MODELLING OF CONCRETE MICROSTRUCTURE Daniel Ryppl, Tomáš Bým.....	77
MULTI-SCALE AND MULTI-PHYSICS STUDY OF CHARLES BRIDGE IN PRAGUE AS A BASIS FOR REHABILITATION Jan Novák, Jan Zeman, Michal Šejnoha, Jiří Šejnoha.....	83

MATERIAL MODELS FOR CONCRETE USED IN COUPLED PROBLEMS IN PROGRAM SIFEL Tomáš Koudelka, Tomáš Krejčí.....	89
COMPARISON OF OPTIMIZATION ALGORITHMS SUITABLE FOR MICROSTRUCTURE RECONSTRUCTION Anna Kučerová, Matěj Lepš, Zuzana Vittingerová.....	95
LUMPED PRECONDITION OF FETI METHOD Jaroslav Brož, Jaroslav Kruis.....	101
DOMINANT STRESS CHANGES REGULATE THE OSTEOPOROTIC BONE DENSITY Miroslav Petrtýl, Jana Danešová, Jaroslav Lísal.....	107
MODIFIED FETI METHOD FOR COMPOSITE ANALYSIS Jaroslav Kruis.....	123
THE SPATIAL COMPONENTS EVALUATION PROCEDURE OF THERMAL ACTION ON THE PRE-STRESSED CONCRETE BRIDGE (THE 3 RD TYPE) Michal Polák, Tomáš Plachý.....	127
THE MONITORING OF THE RESPONSE CAUSED BY TRAFFIC LOAD ON THE CONCRETE-STEEL SLAB-ON-GIRDER BRIDGE Michal Polák, Tomáš Rotter, Tomáš Plachý.....	133
PROPERTIES OF GLASS AND POLYPROPYLENE HYBRID FIBER REINFORCED CEMENT COMPOSITE Eva Vejmelková, Petr Konvalinka, Robert Černý.....	139
MINIMALIZACE ŠTÍTOVÉHO ÚČINKU RIGIDNÍCH IMPLANTÁTŮ Aleš Jíra, Miroslav Petrtýl, Jana Danešová.....	149