

Contents

ARCHITECTURE AND URBAN PLANNING

Ivor Samuels

How to kill the street without destroying the buildings..... 5

Karolina Dudzic-Gyurkovich

Public space and urban barriers in cracow. Analysis of the existing state..... 19

Michał Krupa

Revalorisation project of the 19th-century Bohaterów Monte Cassino Park in Jarosław..... 35

CHEMISTRY

Krzysztof S. Danel, Oskar Michalski, Zoryana Usatenko,

Jerzy Sanetra, Elżbieta M. Nowak

Dicyanovinyl end-capped 9,10-bis (phenylethynyl) anthracenes for organic solar cells 47

CIVIL ENGINEERING

Małgorzata Janus-Michalska

Hyperelastic behaviour of auxetic material in tension and compression tests..... 61

Dariusz Starkowski

Load restraint with allsafe products. Part 1: choosing a semi-trailer

– a systematic analysis..... 71

Rafal Szydłowski, Katarzyna Bednarz

Material and construction solutions of war shelters with the example of Hitler's main

headquarters in the Wolf's Lair..... 87

ELECTRICAL ENGINEERING

Krzysztof Schiff

Ant colony optimisation algorithm for the facility localisation problem..... 103

ENVIRONMENTAL ENGINEERING

Barbara K. Wilk, Małgorzata Cimochowicz-Rybicka

Biovac® wastewater treatment plants in the mountain national parks 113

Andrzej Kotowski, Monika Nowakowska

Standards for the dimensioning and assessment of reliable operations of area

drainage systems under conditions of climate change 125

Stanisław Biedognis, Andrzej Czapczuk

The Application of the 'K-nearest neighbour' method to evaluate pressure loss

in water supply lines 141

Maria Elżbieta Kowalska, Janina Zaczek-Peplinska

Examples of measuring marks used in geo-reference and the connection between classic

geodetic measurements and terrestrial laser scanning..... 151

MECHANICS

Urszula Ferdek

- The modelling and analysis of shock absorbers with stroke-dependent damping* 163
Marcin Jasiewicz

- The dynamic repeatability of a machine tool-holder-workpiece system* 177
Patryk Różyło

- Numerical analysis of crack initiation and propagation in an aluminium sample* 187
Lena Krawczyk, Marlena Sołek, Łukasz Mika

- Ice slurry flow in ball valves* 195