

International Conference on Interactive Design, Architecture and Engineering (ICIDAE 2021)

Held online due to COVID-19

IOP Conference Series: Materials Science and Engineering
Volume 1148

Suzhou, China
17 - 19 March 2021

ISBN: 978-1-7138-3418-2
ISSN: 1757-8981

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

ARCHITECTURAL STRUCTURE – ENERGY EFFICIENCY

THE USE OF ARTIFICIAL INTELLIGENCE (AI) AND BIG-DATA TO IMPROVE ENERGY CONSUMPTION IN EXISTING BUILDINGS	1
<i>Mamdooh Alwetaishi, Amal Shamseldin</i>	
DESIGNING A FACADE BY BIOMIMICRY SCIENCE TO EFFECTIVELY CONTROL NATURAL LIGHT IN BUILDINGS (GLARE ANALYSIS).....	7
<i>Sukhum Sankaewthong, Teerayut Horanont, Kazunori miyata, Jessada Karnjana</i>	
THE UTILIZATION OF GREEN ROOFS AND WALLS "ECOSYSTEM SERVICES" AS A STRATEGY TO MITIGATE CLIMATE CHANGE	17
<i>Susana Moya Vicuña, Marcelo Villacis Ormaza</i>	
REMOTELY PILOTED AIRCRAFT SYSTEM (RPAS) USE IN CONSTRUCTION: A THERMOGRAPHY INSPECTION CASE STUDY	25
<i>M Videras Rodríguez, A Sánchez Cordero, S Gómez Melgar, J M Andújar Márquez</i>	

CONSTRUCTION'S TECHNOLOGY

STUDY ON NEW TEST TECHNOLOGY OF PILE FOUNDATION BEARING CAPACITY	35
<i>Zhang Xue-feng</i>	
DAMAGE ANALYSIS OF DEEP WATER HIGH PILE CAP FOUNDATIONS UNDER DIFFERENT CONCRETE CORROSION BY SHIP IMPACT LOAD	41
<i>Zhang Xuefeng</i>	

ARCHITECTURAL DESIGN

STRUCTURAL EFFICIENCY OF THE 'POMBALINO FRONTAL' INFILLED WITH MORTAR.....	48
<i>António Morais, Carmo Fialho, Basto Diogo, Svetlana Ivanova</i>	
THE 'POMBALINO FRONTAL' DESIGN AND ITS STRUCTURAL EFFICIENCY.....	56
<i>António Morais, Carmo Fialho, Lam dos Santos</i>	
ECOLOGICAL PLANNING OF THE URBAN RESIDENTIAL AREA FOR THE SUSTAINABLE DEVELOPMENT	65
<i>Ning Kang, Yan Liu, Zhihong Wang</i>	

Author Index