

Journal of Materials and Engineering Structures

ISSN - Online : 2170-127X

Mouloud Mammeri University of Tizi-Ouzou

ⵜⴰⵎⴰⵎⵎⵉⵔⵉⵜ ⵜⴰⵖⵔⴰⵏⵜ ⵜⴰⵣⵣⴰⵢⵔⵉⵜ ⵜⴰⵖⵔⴰⵏⵜ ⵜⴰⵣⵣⴰⵢⵔⵉⵜ

جامعة مولود معمري تيزي وزو



Volume 7, Issue 4, December, 2020

SPECIAL ISSUE

*3rd International Conference on Sustainability in Civil Engineering
(ICSCE 2020) - 26-27th November, Hanoi, Vietnam*

**RESEARCH REVIEW of
Sciences and Technologies**



RESEARCH REVIEW OF SCIENCES AND TECHNOLOGIES

EDITEUR

Université Mouloud MAMMERI de Tizi-Ouzou

BP 17 RP 15000, Tizi-Ouzou

Tél : 026 21 89 95 – 026 21 53 14 – 026 41 07 78

Fax : 026 21 29 68

Courriel : univ_tizi@ummto.dz

Site internet : <http://www.ummto.dz>

Responsables de la rédaction

Pr. Farid ASMA, Responsable des revues en ligne, Research Review of Sciences and Technologies, Editeur en Chef, UMMTO, Algérie

Pr. Hocine HAMMOUM, Editeur en Chef, UMMTO, Algérie

Assistants éditoriaux / Editorial Assistants

Melle. Djamila MANSOUR, Assistante informatique, conception et réalisation

Mr. Said CHEKLAT, Assistant informatique, réseau et design

Email: rrst@ummto.dz

<http://revue.ummto.dz>

RESEARCH REVIEW of
Sciences and Technologies

JOURNAL OF MATERIALS AND ENGINEERING STRUCTURES « JMES »

EDITORIAL BOARD / COMITÉ EDITORIAL

Editors in Chief / Editeurs en Chef

- **Pr. Farid ASMA**, Université Mouloud Mammeri de Tizi-Ouzou, Algeria
- **Pr. Hocine HAMMOUM**, Université Mouloud Mammeri de Tizi-Ouzou, Algeria

Editorial Assistants / Assitants Editoriaux

- **Dr. Amar ALICHE**, Civil Engineering Department, Mouloud Mammeri University, BP 17 RP 15000, Tizi-Ouzou, Algeria
- **Dr. Samir TIACHACHT**, Mouloud MAMMERI University, BP 17 RP, 15000, Tizi-Ouzou, Algeria

Scientific Committee / Comité Scientifique

- **Pr. Fekri MEFTAH**, Université de Cergy-Pontoise, France
- **Dr. Marc OUDJENE**, Université de Lorraine, France
- **Pr. Khemais SAANOUI**, Université de Technologie de Troyes, France
- **Pr. Redouane ZITOUNE**, Université de Toulouse, France
- **Dr. Mohamed SONEBI**, Queen's University, Belfast, Northern Ireland, UK
- **Pr. Khalil El-Hami**, University of Hassan 1, Faculty of Khouribga, Morocco
- **Pr. Hakim S. Abdelgader**, Department of Civil Engineering, Tripoli University, Tripoli, Libya
- **Pr. Kamal Mohammedi**, M. Bougara University, Boumerdès MESOnexusteam/LEMI, Algeria
- **Dr. Muhammad Mubarak**, Jazan University, Saudi Arabia
- **Pr. Jamal Khatib**, Faculty of Science and Engineering, University of Wolverhampton, United Kingdom
- **Dr. Ahmed Benamar**, Université du Havre LOMC UMR 6294 CNRS, France
- **Pr. Abdenour Alliche**, Université Paris 6, France
- **Pr. Ouali Amiri**, Université de Nantes, France
- **Dr. Taghreed Khaleefa Mohammed Ali**, Koyauniversity, Iraq
- **Prof. Dr. A.S.M. Abdul Awal**, Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia
- **Dr. Mena Souliman**, University of Texas at Tyler, United States
- **Prof. Prasanta Sahoo**, Jadavpur University Department of Mechanical Engineering Kolkata 700032, India
- **Dr. Hossam El-Din Sallam**, Jazan University, Saudi Arabia
- **Dr. Tarek MERZOUKI**, Université de Versailles Saint Quentin en Yvelines Laboratoire Ingénierie des Systèmes de Versailles, France
- **Dr. HDR Badis HADDAG**, Laboratoire LEM3 – UMR CNRS 7239 Institut Mines-Telecom, InSIC 27 voie de l'Innovation, 88100 St-Dié – France
- **Dr. Le thanh Cuong**, Faculty of civil engineering, Ho Chi Minh city, Open University, Ho chi Minh City, Vietnam
- **Dr. Samir Khatir**, Department of Electrical Energy, Metals, Mechanical Constructions, and Systems, Faculty of Engineering and Architecture, Ghent University, Gent, Belgium
- **Prof. Ibrahim Galal Shaaban**, Visiting Professor, University of Liverpool, UK, United Kingdom

Editorial Support / Soutien Editorial

- **Melle. Djamila MANSOUR**
- **Mr. Said CHEKLAT**

Email: jmes@ummtto.dz

Site : <http://revue.ummtto.dz/index.php/JMES>

Journal of Materials and Engineering Structures

Vol. 7, No. 4, June (2020)

Special Issue - Third International Conference on Sustainability in Civil Engineering (ICSCE 2020) - 26-27th November 2020, Hanoi, Vietnam

Table of Contents

Editorial

Editorial <i>Farid ASMA, Hocine HAMMOUM</i>	519
--	-----

Special Issue : 3rd Int. Conf. Sustainability Civil Eng. (ICSCE 2020)

Contributions of Concrete Recycling Technology toward Sustainable Development: Standards and Technologies Related to Recycled Aggregate Concrete in Japan <i>Yasuhiro DOSHO</i>	525
From quality control to decision-making on the management of bridges and structures: What's next? <i>José Antonio SILVA CARVALHO CAMPOS MATOS, Sérgio FERNANDES, Hélder SOUSA, Mário COELHO, Elisabete TEIXEIRA, Yina MOSCOSO, Joaquim TINOCO</i>	551
Examination of influential factors on shear strength of externally bonded FRP reinforcement in RC beams <i>Linh Van Hong BUI, Phuong Chau NGO, Ba-Phu NGUYEN, Dung Quang NGUYEN, Nam Van NGUYEN</i>	561
Experiment and FEM Modelling of Bond Behaviors between Pre-stressing Strands and Ultra-High-Performance Concrete <i>Duy Hoa PHAM, Ba Danh LE, Dang Tung KHUC, Thanh Quang VU, Trong Toan KHONG, Van Trinh DO, Quy Tuan NGO</i>	567
Characteristics of shear strength at the interface between two soil layers in ring shear apparatus <i>Duong NGUYEN THANH, Nu NGUYEN THI, Hai NGUYEN VAN, Lan NGUYEN CHAU, Tien PHAM VAN, Motoyuki SUZUKI</i>	575
Experimental Research on Properties of Polymer Concrete Used for Repairing Portland Cement Concrete Pavement of Airport <i>Pham Huy KHANG, Nguyen Trong HIEP</i>	583
Effect of surface treatment of recycled concrete aggregate by cement -silica fume slurry on compressive strength of concrete <i>Ho Anh Thu NGUYEN, Nguyen Ngoc Han DINH, Phuong Trinh BUI</i>	591
Wind induced vibration of stay cable bridge evaluation based on the operational accelerometers monitoring data and field testing <i>Duy Phuong NGUYEN, Lan Duc TRAN</i>	597
Limitations of cyclic pile load tests by kentledge system in soft clay soil <i>Lan Vu Hoang BACH, Dan V. TRAN</i>	605
Behavior of monolithic prestressed concrete slab track at highway-railway grade crossings <i>Tran Anh DUNG, Le Hai HA, Tran The TRUYEN, Nguyen Hong PHONG</i>	613
Damage detection in structural health monitoring using combination of deep neural networks <i>Hieu NGUYEN-TRAN, Thanh BUI-TIEN, Magd ABDEL WAHAB, Dung BUI-NGOC</i>	619

Analysis of bearing capacity of bored piles from bi-directional load test: A case study in Quang Ngai province <i>Dao Huu DO, Van-Ngoc PHAM, Anand J. PUPPALA, Duc-Manh NGUYEN</i>	627
Study on Wash-out of Asphalt Mixture Caused by Repeated Heating and Cooling Immersion Test <i>Hiroki Imai, Mohd Rosli Mohd HASAN, Nguyen Quang PHUC, Hiromitsu NAKANISHI, Akihiro KATO, Tomohiro ANDO</i>	633
Numerical analysis of pipe jacking in deep soft soil based on the construction of urban underground sewage pipeline <i>Ji CHEN, Bangyao ZHONG, Jianxin YANG, Xuenan ZHENG, Xuegang ZHU, Qiang TANG</i>	639
Research on Design Method of Long-life Asphalt Pavement <i>Jinzhaio SUN, Shengkun WU, Wenbing ZHU, Yong LU, Hao WU, Yucheng HUANG, Qiang TANG</i>	645
Moment Resistances of wide flange beams with initial imperfection and residual stresses <i>Pham Van PHE, Xuan Huy NGUYEN</i>	651
Enhancement of moment resistance of steel beams with initial imperfections and residual stresses by using stiffeners and GFRP plates <i>Pham Van PHE</i>	659
Effects of steel corrosion to BFRP Strengthened columns under eccentric loading <i>Tin Xuan HUYNH, Truc Trung NGUYEN, Quang Tri TRAN, Thuy Thanh NGO</i>	669
Modelling of Creep Rupture in Clay using the Bounding Surface Viscoplasticity Theory <i>Thi Ngoc MAC, Babak SHAHBODAGH, Nasser KHALILI</i>	677
Material Design for Concrete Using Low-Quality Recycled Aggregate <i>Duc NGUYEN ANH, Yasuhiro DOSHO, Kenji NISHIKIGI, Linh DINH VAN</i>	685
Expanding the Use of Fly Ash as an Admixture in Concrete in Vietnam <i>Phuong DAO THI, Yasuhiro DOSHO, Kenji NISHIKIGI, Duc NGUYEN ANH</i>	695
The effects of ground vibration induced by construction activities of urban railways in Hanoi <i>Nguyen Thi Cam NHUNG, Quang Minh TRAN</i>	703
Experimental study of short concrete columns reinforced with GFRP bars under monotonic loading <i>An Vinh LE, Hiep Vu DANG, Duy Phan NGUYEN</i>	711

ISSN 2170-127X



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](http://creativecommons.org/licenses/by-sa/4.0/).
Based on a work at <http://revue.ummto.dz>.