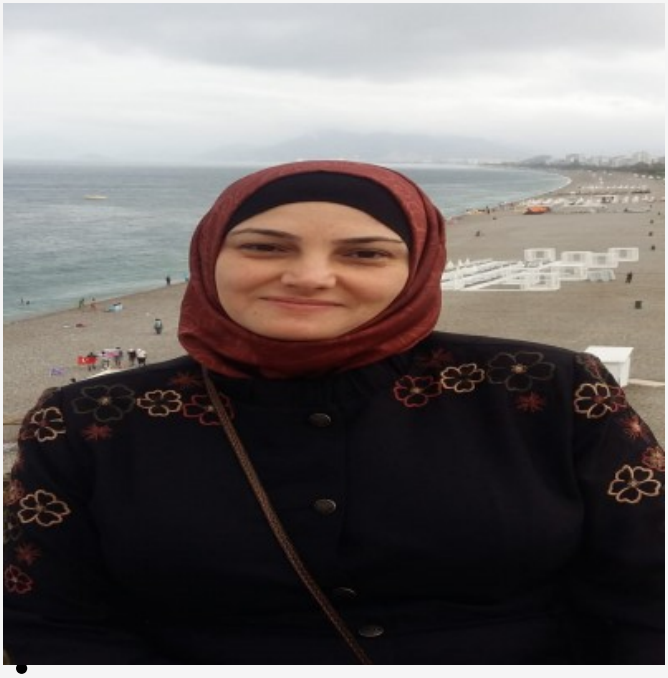
PROFESSIONAL DETAILS



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Phone 009647504344090

Gender female

Birth Date 1978-08-09

Address Iraq - Duhok

- **Nationality** Iraqi

- Akre Technical Institute
- Surveying

LANGUAGE

- **Kurdish** (Native)
- **Arabic** (Proficient)
- **English** (Intermediate)
- **Turkish** (Intermediate)

SPECIALTIES

Construction Materials Light-Weight Construction Concrete Technology Mix Design Eco-Friendly Construction Geopolymer Concrete Technology Nano-Materials Technology Mechanical and Durability Performance of Concrete Fiber Reinforced Polymer (FRP) Carbon Fiber-reinforced Polymer (CFRP) Basalt Fiber-reinforced Polymer (BFRP) Sulfuric Acid Attack Magnesium Sulfate Attack Seawater Attack Engineered Cementitious Composite (ECC) and Steel Fiber Reinforced Concrete (SFRC).

TEACHING MATERIAL

Microsoft Word Microsoft Powerpoint Microsoft Excel Engineering Programs Mix Design Statistic Analysis Non-Destructive Tests Auto-CAD Auto-Disc GPS and Surveying Machines Technology.

SOCIAL LINKS

Google Scholar Research Gate LinkedIn ORCID - Connecting Research and Researchers Publons - Evaluating Academic Research

EDUCATION

Sep, 2018

Doctorate in Civil Engineering (Ph.D degree)

Civil Engineering-Construction Materials

Gaziantep University

Jul, 2012

Master Degree in Civil Engineering-Construction Materials

Civil Engineering-Construction Materials

Gaziantep University

Jul, 2002

Bachelor in Civil Engineering

Irrigation and Drainage

Mosul University

TITLE

Sep, 2018

Lecturer

Apr, 2013

Assistant Lecturer

PROFESSIONAL EXPERIENCE

Oct, 2018 - Jul, 2019

Lecturer

Akre Technical Institute-Department of Surveying

Akre/Duhok/Iraq

. Work as a Lecturer in ATI-Surveying department

Aug, 2012 - Apr, 2015

Assistance Lecturer

Akre Technical Institute-Department of Surveying

Akre/Duhok/Iraq

. Work as an assistant Lecturer in ATI-Surveying department

Aug, 2003 - Aug, 2010

Site Engineer-Assistance Lecturer

Akre Technical Institute-Department of Surveying

Akre/Duhok/Iraq

Site Engineer Responsibilities: 1. Observed the progress of the daily work, 2. Made sure the safety precautions are taken into consideration, 3. Kept records of construction materials (mini office work), 4. Helped in directing the workers, Coordinated with different site Engineers and, 5. Other duties per requirement such as estimation works. 6. Work as an assistant lecturer in ATI-Surveying department

SKILLS

Computer: . Microsoft Windows applications (Word, Excel, Office, PowerPoint) – Advanced • Microsoft Office Document Imaging and Scanning - Advanced

AutoCAD: • AutoCAD - Advanced • Autodesk – Advanced

Internet: Searching and find interested and suitable Scientific Journals, Submitting research papers and Social media (Linkedin, Twitter, and Facebook)

INTEREST

Concrete Technology:

Construction Materials, Light-Weight Construction, Mix Design, Eco-Friendly Construction and Mechanical and Durability Performance of Concrete.

COMPOSITE MATERIALS:

Fiber Reinforced Polymer (FRP), Carbon Fiber-reinforced Polymer (CFRP), Basalt Fiber-reinforced Polymer (BFRP), Engineered Cementitious Composite (ECC) and Steel Fiber Reinforced Concrete (SFRC).

Fiber Reinforced Concrete (FRP) Technology:

FRP Technology, Mechanical and Durability performance of FRP confined concrete, Types of FRP sheets, and Characteristic of FRP fabrics under chemical attack

Geopolymer Concrete (GPC) Technology:

Mechanical and Durability properties of GPC under chemical attack, Ambient curing GPC, FRP-confined GPC, Self-compacting GPC (SCGPC), and steel fiber reinforced GPC

Nano Technology:

Use of Nano-materials (ex: Nano-silica) to enhance the mechanical and durability properties of concrete

MEMBERSHIP

Oct, 2018 - Current

American Society of Civil Engineers (ASCE)

Alaa Mohammedameen

Iraq/Duhok

Jul, 2002 - Current

Kurdistan Engineers Union

Alaa Abdulhameed Mohammedameen

Iraq/Duhok

PUBLICATION JOURNAL

Dec, 2019

Performance of FRP confined and unconfined engineered cementitious composite exposed to seawater

Journal of Composite Materials (Issue: 28-30) (Volume: 53)

Conventional concrete suffers from brittle failures under mechanical behaviour, and lack of ductility results in the loss of human life and property in earthquake zones. Therefore, the degree of ductility becomes significant in seismic regions. This paper investigates the influence of poly-vinyl alcohol fibers, basalt fiber-reinforced polymer (BFRP) and carbon fiber-reinforced polymer (CFRP) fabrics on the ductility and mechanical performance of low (LCFA) and high (HCFA) calcium fly ash-based engineered cementitious composite concrete. The study also focuses on the mechanical behaviour of the CFRP and BFRP materials using different matrix types exposed to 3.5% seawater environment. Cyclic loading and scanning electron microscopy observations were also performed to see the effect of chloride attack on mechanical performance and ductility of the specimens. In addition, utilization of CFRP and BFRP fabrics …

Nov, 2019

Mechanical performance of FRP-confined geopolymer concrete under seawater attack

Advances in Structural Engineering

In the study, mechanical properties and durability performance of confined/unconfined geopolymer concrete and ordinary concrete specimens were investigated under ambient and seawater environments. Some of the specimens were confined by carbon fiber and basalt fiber–reinforced polymer fabric materials with one layer and three layers under chloride and ambient environments to observe mechanical strength contribution and durability performances of these hybrid types of materials. These fiber-reinforced polymer

fabric materials were also evaluated in terms of retrofit purposes especially in the marine structures. In addition, microstructural evaluation is also conducted using scanning electron microscope on geopolymer concrete and ordinary concrete specimens to observe the amount of deterioration in microscale due to the chloride attacks. Results indicated that confined specimens exhibited enhanced strength, ductility, and durability properties than unconfined specimens, and the degree of the enhancement depended on the fiber-reinforced polymer confinement type and the number of fiber-reinforced polymer layer. Specimens confined by carbon fabrics with three layers showed superior mechanical properties and durability performance against chloride attack, while specimens confined by basalt fabrics with one layer exhibited low performance, and unconfined specimens showed the worst performance. Both fiber-reinforced polymer fabric materials can be utilized as retrofit materials in structural elements against chloride attacks. The results also pointed out that seawater attack reduced the ductility performance of the geopolymer concrete and ordinary concrete specimens. Furthermore, geopolymer concrete specimens were found more durable than the ordinary concrete specimens, and both types of concretes exhibited similar fracture properties, indicating that geopolymer concrete can be utilized for structural elements instead of ordinary concretes.

May, 2019

Mechanical properties and durability of unconfined and confined geopolymer concrete with fiber reinforced polymers exposed to sulfuric acid

Construction and Building Materials (Volume: 215)

This study reports the mechanical properties and durability of unconfined/confined sustainable geopolymer concrete (GPC) exposed to sulfuric acid attack under static and cyclic loadings. A low calcium (Class F) fly ash incorporating nano-silica was activated by a combination of sodium silicate and sodium hydroxide solutions to make the GPC. Unconfined/confined ordinary Portland cement concrete (OPCC) counterparts were also made for comparison purposes. The confined GPC/OPCC specimens were wrapped by one/three layers of basalt/carbon fiber-reinforced polymers (BFRP/CFRP). Effects of type and number of wrapping layers, along with wrapping and testing ages on the mechanical properties and durability of confined GPC/OPCC were investigated. In addition, microstructure of the unconfined/confined GPC specimens was compared with that of the unconfined OPCC counterparts. The results showed confinement of the GPC with BFRP/CFRP fabrics enhanced the strength, ductility and durability of the GPC exposed to sulfuric acid. The GPC confined with CFRP fabric was more ductile and durable than that confined with BFRP fabric. In addition, the GPC confined with three layers of BFRP/CFRP fabric was more ductile and durable than that confined with only one layer. Further, the unconfined/confined GPC was more durable than the corresponding unconfined/confined OPCC.

Aug, 2018

Performance of FRP confined and unconfined geopolymer concrete exposed to sulfate attacks

Steel and Composite Structures (Issue: 2) (Volume: 29)

In this study, the effects of magnesium sulfate on the mechanical performance and the durability of confined and unconfined geopolymer concrete (GPC) specimens were investigated. The carbon and basalt fiber reinforced polymer (FRP) fabrics with 1-layer and 3-layers were used to evaluate the performances of the specimens under static and cyclic loading in the ambient and magnesium sulfate environments. In addition, the use of FRP materials as a rehabilitation technique was also studied. For the geopolymerization process of GPC specimens, the alkaline activator has selected a mixture of sodium silicate solution (Na2SiO3) and sodium hydroxide solution (NaOH) with a ratio (Na2SiO3/NaOH) of 2.5. In addition to GPC specimens, an ordinary concrete (NC) specimens were also produced as a reference specimens and some of the GPC and NC specimens were immersed in 5% magnesium sulfate solutions. The mechanical performance and the durability of the specimens were evaluated by visual appearance, weight change, static and cyclic loading, and failure modes of the specimens under magnesium sulfate and ambient environments. In addition, the microscopic changes of the specimens due to sulfate attack were also assessed by scanning electron microscopy (SEM) to understand the macroscale behavior of the specimens. Results indicated that geopolymer specimens produced with nano-silica and fly ash showed superior performance than the NC specimens in the sulfate environment. In addition, confined specimens with FRP fabrics significantly improved the compressive strength, ductility and durability resistance of the …

Apr, 2018

Effects of sulphuric acid on mechanical and durability properties of ECC confined by FRP fabrics

Advances in Concrete Construction (Issue: 2) (Volume: 6)

In this study, the effects of sulphuric acid on the mechanical performance and the durability of Engineered Cementitious Composites (ECC) specimens were investigated. The carbon fiber reinforced polymer (CFRP) and basalt fiber reinforced polymer (BFRP) fabrics were used to evaluate the performances of the confined and unconfined ECC specimens under static and cyclic loading in the acidic environment. In addition, the use of CFRP and BFRP fabrics as a rehabilitation technique was also studied for the specimens exposed to the sulphuric acid environment. The polyvinyl alcohol (PVA) fiber with a fraction of 2% was used in the research. Two different PVA-ECC concretes were produced using low lime fly ash (LCFA) and high lime fly ash (HCFA) with the fly ash-to-OPC ratio of 1.2. Unwrapped PVA-ECC specimens were also produced as a reference concrete and all concrete specimens were continuously immersed in 5% sulphuric acid solution (H2SO4). The mechanical performance and the durability of specimens were evaluated by means of the visual inspection, weight change, static and cyclic loading, and failure mode. In addition, microscopic changes of the PVA-ECC specimens due to sulphuric acid attack were also assessed using

scanning electron microscopy (SEM) to understand the macroscale behavior of the specimens. Results indicated that PVA-ECC specimens produced with low lime fly ash (LCFA) showed superior performance than the specimens produced with high lime fly ash (HCFA) in the acidic environment. In addition, confinement of ECC specimens with BFRP and CFRP fabrics significantly improved compressive …

Feb, 2018

Mechanical and durability performance of FRP confined and unconfined strain hardening cementitious composites exposed to sulfate attack

Construction and Building Materials (Volume: 207)

In this study, the performance of Fiber Reinforced Polymer (FRP) confined and unconfined Strain Hardening Cementitious Composite (SHCC) specimens exposed to sulfate attack under static and cyclic loading were investigated. Two types of FRP fabrics (Basalt (BFRP) and Carbon (CFRP)) and two types of fly ash (Low calcium (LCFA) and high calcium (HCFA)) were studied. In addition, FRP fabrics as a rehabilitation material was also investigated for the sulfate deteriorated specimens. LCFA-SHCC specimens showed superior performance than HCFA-SHCC specimens in the sulfate environment. In addition, confined specimens with FRP fabrics significantly improved compressive strength, ductility, and durability of the specimens.

Jan, 2014

Enhancement of shrinkage behavior of lightweight aggregate concretes by shrinkage reducing admixture and fiber reinforcement

Construction and Building Materials (Volume: 54)

This paper presents the results obtained from an experimental study conducted to investigate the effect of shrinkage reducing admixture (SRA) and steel fiber addition on the performance properties of lightweight aggregate concrete (LWAC). Total of seven LWAC mixes with SRA or steel fibers were produced at the same water-cement ratio using cold-bonded fly ash coarse aggregates. The percentage of steel fiber volume fractions used in the mixes was 0.25, 0.75 and 1.25. The amount of SRA used in the mixes was 0.75%, 1.5% and 3 % by weight of cement. Ring type specimens were used for the restrained shrinkage cracking test. At the same time, free shrinkage and weight loss of LWACs were measured. Moreover, the compressive and split tensile strength tests were undertaken. The results indicated that the use of steel fibers has little effect on compressive strength but it improves the split tensile strength. The addition of SRA decreases compressive strength without affecting tensile strength. Moreover, the utilization of steel fiber or SRA extends the cracking time and reduces the crack width of LWAC resulting in finer cracks associated with lower free shrinkage.

WORKSHOP

Dec, 2014 - Jan, 2015

Learning English Language and Studding Technology

Eastern Mediterranean University (EMU), Cyprus As Guest

Learning English Language and Studding Technology. Eastern Mediterranean University (EMU), Cyprus

Aug, 2013 - Aug, 2013

Workshop on Improving English Language

Akre Technical Institute As Guest

Improve the English Language through improving reading, speaking, writing, and listing skills

Jul, 2013 - Jul, 2013

Learning how to use GPS and Total station Instruments

Akre Technical Institute-Surveying Department As Guest

Learning how to use both GPS differential and Total Station Instruments. The survey, and Planning

Jul, 2013 - Jul, 2003

Learning how to use Auto-desk Program

Akre Technical Institute-Surveying Department As Guest

Learning how to use Auto-desk program and ho to export or transfer documents from Instruments to the Program or from the program to them.

Feb, 2013 - Mar, 2013

Workshop on Administration Management program

Akre/Duhok/Iraq As Guest

Learning procedure of how to manage site engineering and how to fill contracts for new engineering projects.

Jul, 2007 - Jul, 2007

Workshop on how to use Internet browsers

Akre Technical Institute-Surveying Department As Guest

Improve the use of the Internet and how to search for scientific research.