

Basic Information :

Name : AHMED FAROUK MOHAMED HASSAN DEIFALLAH
Title : Professor



Education:

Certificate	Major	University	Year
PhD	Civil Engineering	McMaster University - Canada	2008
Masters	Civil Engineering - Structural Engineering	Cairo University - Faculty of Engineering	2001
Bachelor	civil engineering	Cairo University - Faculty of Engineering	1998

Teaching Experience:

Name Of Organization	Position	From Date	To Date
FUE	Vice Dean	04/02/2018	Current

Researches / Publications :

Predicting the crack repair rate of self-healing concrete using soft-computing tools
First and second law analysis of a heat exchanger equipped with perforated wavy strip turbulator in the presence of Water-CuO nanofluid
Exploring the impact of varying notch-width ratios on electromagnetic radiation parameters at tensile fracture of C35000 brass
Multi-objective optimization of a microchannel heat sink with a novel channel arrangement using artificial neural network and genetic algorithm
A surrogate safety analysis at sharp gore areas of diverging freeway ramps using micro simulation under congested traffic conditions
An overview of the research trends on fiber-reinforced shotcrete for construction applications
Overall efficiency increment in a pin-fin microchannel heat sink using response surface methodology and Pareto optimization
Thermo-economic-environmental evaluation of an innovative solar-powered system integrated with LNG regasification process for large-scale hydrogen production and liquefaction
Fresh state and strength performance evaluation of slag-based alkali-activated concrete using soft-computing methods
A heat recovery-based thermal system design for an innovative solar thermal-driven multigeneration scheme: Energy, exergy, economic, and environmental (4E) analysis
Thermal-frictional behavior of new special shape twisted tape and helical coiled wire turbulators in engine heat exchangers system
New applications of the fractional derivative to extract abundant soliton solutions of the fractional order PDEs in mathematics physics
Arc-curved microchannels engraved on segmented circular heat sink for heat transfer augmentation; ANN-based performance optimization
Analyzing Soliton Solutions of the -dimensional generalized Kadomtsev. Petviashvili equation: Comprehensive study of dark, bright, and periodic dynamics
Advancements in low-carbon concrete as a construction material for the sustainable built environment
A hybrid Cycle GAN-based lightweight road perception pipeline for road dataset generation for Urban mobility
Complex dynamics of induced vortex formation and thermal-fluid coupling in tri-hybrid nanofluid under localized magnetic field: a novel study

Evaluation of Factors Affecting the Competitive Advantage of Organizations in Establishing Sustainable Project Management Post Covid-19
Data-driven strategy for evaluating the response of eco-friendly concrete at elevated temperatures for fire resistance construction
Feasibility of sequential anaerobic-aerobic integrated settler-based biofilm reactor for onsite treatment of domestic wastewater
Thermal performance enhancement in a double tube heat exchanger using combination of bubble injection and helical coiled wire insert
Case study of entropy optimization with the flow of Non-Newtonian nanofluid past converging conduit with slip mechanism: An application of geothermal engineering
Improving thermal and hydraulic performances through artificial neural networks: An optimization approach for Tesla valve geometrical parameters
Assessment of the mechanical and durability characteristics of bio-mineralized Bacillus subtilis self-healing concrete blended with hydrated lime and brick powder
Influence of cyclic loading on lightweight self-compacting concrete double-skin tubular columns
Mix design optimization of metakaolin-slag-based geopolymer concrete synthesis using RSM
Development of a novel power and freshwater cogeneration plant driven by hybrid geothermal and biomass energy
Assessment of Compression Design of CFST
Assessment and Calibration of the ACI Punching Shear Resistance of LW Slabs Using Reliability Methods
FRP-RC Slabs Under Punching Shear: Assessment of Existing Models
Punching Shear Strength of FRP-Reinforced-Concrete using a Machine Learning Model
Torsion Strength of Concrete Beams with Steel Fibers, lightweight, or FRP: data driven code appraisal
Critical Shear Crack Theory for Shear Strength of Elements Subjected to Tension or Reinforced with FRP
Performance of lightweight foamed concrete partially replacing cement with industrial and agricultural wastes: Microstructure characteristics, thermal conductivity, and hardened properties
Prediction of the rubberized concrete behavior: A comparison of gene expression programming and response surface method
Numerical analysis of thermohydraulic and exergetic performance in corrugated spiral tubes with diverse arc corrugation configurations
Entropy generation analysis on heat transfer characteristics of Twisted corrugated spiral heat exchanger utilized in solar pond
Exploring the antecedents of AI adoption for effective HRM practices in Indian Pharmaceutical Sector
Overcoming implementation barriers in 3D printing for gaining positive influence considering PEST environment
Analysis of the mechanical properties of the single layered braid reinforced thermoplastic pipe (BRTP) for oil & gas industries
Study of Thermal And Mechanical Behavior by Analyzing Reinforcement Effect of Graphene Nanoplatelets on Polyamide-66 Composite System Developed via Melt-Mixing Technique
Energy, exergy and exergoeconomic analysis of a trans-critical CO ₂ cycle powered by a single flash geothermal cycle in with/without economizer working modes
Steel Fiber Reinforced Self-Compacting Concrete: A Comprehensive Review
Concrete Made with Partial Substitutions of Wheat Straw Ash: A Review
Perceptions and Preferences of University Students for Use of Pedestrian Bridge: A Gender Based Study
Tribological and oxidation resistance performance of Ti ₂ AlC MAX-phase generated by reactive spark plasma sintering
Investigating the feasibility of producing sustainable and compatible binder using marble waste, fly ash, and rice husk ash: A comprehensive research for material characteristics and production
Evaluation of small hydropower turbines installed downstream of Nile River branches (Egypt)
Investigation and impact assessment of soybean biodiesel, methyl oleate, and diesel blends on CRDI performance and emissions
Impediments in BIM implementation for the risk management of tall buildings
First principle study to investigate color tunable properties in Bi ³⁺ , Tb ³⁺ , and Yb ³⁺ doped GdVO ₄ phosphor

A Two-Fold SPR-SERS Sensor Utilizing Gold Nanoparticles and Graphene Thin Membrane as a Spacer in a 3D Composite Structure
Thermal, mechanical, and photocatalytic dye degradation performances of the functionalized GO and TiO ₂ decorated carbon foam composites
Techno-economic case study of applying heat recovery and CO ₂ capture systems on a gas turbine power plant; 4E analysis
Nuclear Radiation Shielding Capabilities Of Fiber-Reinforced Concrete: A Case Study Hybrid-Polypropylene-Steel
Thermal conductivity, microstructure and hardened characteristics of foamed concrete composite reinforced with raffia fiber
Promoting the suitability of rice husk ash concrete in the building sector via contemporary machine intelligence techniques
A review on life cycle assessment of different pipeline materials
Artificial neural network-based optimization of baffle geometries for maximized heat transfer efficiency in microchannel heat sinks
Recent advances in the structure and biomedical applications of nanodiamonds and their future perspectives
Assessing Impacts of Mining-Induced Land Use Changes on Groundwater and Surface Water Quality Using Isotopic and Hydrogeochemical Signatures
Application of waste recycle tire steel fibers as a construction material in concrete
Evaluating the relevance of eggshell and glass powder for cement-based materials using machine learning and SHapley Additive exPlanations (SHAP) analysis
Adsorption Studies of Pb(II) and Cd(II) Heavy Metal Ions from Aqueous Solutions Using a Magnetic Biochar Composite Material
Simulation of Metal Ceramic Single Layer Coatings for Solar Energy Applications
Computational modeling of sigmoid functionally graded material (SFGM) Plate
A hybrid model based on convolution neural network and long short-term memory for qualitative assessment of permeable and porous concrete
A data-driven approach to predict the compressive strength of alkali-activated materials and correlation of influencing parameters using SHapley Additive exPlanations (SHAP) analysis
Investigating the Influence of PVA and PP Fibers on the Mechanical, Durability, and Microstructural Properties of One-Part Alkali-Activated Mortar: An Experimental Study
First-Principles Study of Color-Tunable Properties in Eu-Doped Mg ₂ SnO ₄ Phosphors
A comprehensive numerical study on the effectiveness of a rotational-based PTC collector integrated porous foam and PV module
Design of Punching Shear Of R.C. Footings Using American And European Codes: A Comparative Study
Comparative study of genetic programming-based algorithms for predicting the compressive strength of concrete at elevated temperature
Emission Reduction and Performance Enhancement of CI Engine Propelled by Neem Biodiesel-Neem Oil-Decanol-Diesel Blends at High Injection Pressure
Code Provisions Evaluation for the Punching Shear Capacity of R.C Footings without reinforcement for punching shear
Exergoeconomic Evaluation of a Novel Multigeneration Process Using Solar Driven Kalina cycle Integrated with Gas Turbine Cycle, Double-Effect Absorption Chiller, and Liquefied Natural Gas Cold Energy Recovery
Heat transfer enhancement of a copper tube with constant wall temperature using a novel horizontal perforated teardrop-shaped turbulators (PTST)
Machine learning approach to predict the biofuel production via biomass gasification and natural gas integrating to develop a low-carbon and environmental-friendly design: Thermodynamic-conceptual assessment
Optimization of a near-zero-emission energy system for the production of desalinated water and cooling using waste energy of fuel cells
The influence of coconut fibres and ground steel slag on strength and durability properties of recycled aggregate concrete: Sustainable design of fibre reinforced concrete
Scientometric analysis of flood forecasting for Asia region and discussion on machine learning methods

An innovative biomass-driven energy systems for green energy and freshwater production with less CO2 emission: Environmental and technical approaches
Flexural performance of concrete beams internally reinforced with steel, geogrid and GFRP meshes
The use of crushed recycled glass for alkali activated fly ash based geopolymer concrete and prediction of its capacity
Heterogeneous nucleation and growth of interlaced CuO nanosheets on porous Nickel foams as binder-free electrode material
Influence of Supports on the Low-Velocity Impact Response of Square RC Slab of Standard Concrete and Ultra-High Performance Concrete: FEM-Based Computational Analysis
Predicting the crack width of the engineered cementitious materials via standard machine learning algorithms
Optimizing compressive strength prediction models for rice husk ash concrete with evolutionary machine intelligence techniques
Sensitivity and robustness analysis of adaptive neuro-fuzzy inference system (ANFIS) for shear strength prediction of stud connectors in concrete
Sustainable concrete with partial substitution of paper pulp ash: A review
A shear model for FRP reinforced concrete elements based on refined Critical Shear Crack Theory parameters
Concrete Made with Partially Substitution Corn Cob Ash: A Review
A Review of the Effects of Different Parameters on Salt-Based Solar Thermal Energy Storage Systems
Self-Compacting Concrete with Partially Substitution of Waste Marble: A Review
A critical review on mechanical, durability, and microstructural properties of industrial by-product-based geopolymer composites
An assessment of the processing parameters and application of fibre-reinforced polymers (FRPs) in the petroleum and natural gas industries: A review
Thermal and hydrodynamic management of a finned-microchannel heat sink applying artificial neural network
An integral approach for testing and computational analysis of glass powder in cementitious composites
Simulation of CO2 capture from natural gas by cyclic pressure swing adsorption process using activated carbon Author links open overlay panel
Performance Evaluation of Fiber-reinforced Ferroconcrete using Response Surface Methodology
Competitive study of a geothermal heat pump equipped with an intermediate economizer for various ORC working fluids
Crack Sliding Model for Non-shear FRP-Reinforced Slender Concrete Elements under Shear
A comprehensive investigation of a water and energy-based waste integrated system: Techno-eco-environmental-sustainability aspects Author links open overlay panel
Experimental and Numerical Studies on Flexural Behavior of GGBS-Based Geopolymer Ferrocement Beams
Reliable Machine Learning for the Shear Strength of Beams Strengthened Using Externally Bonded FRP Jackets
Multi-aspect investigation and multi-criteria optimization of a novel solar-geothermal-based polygeneration system using flat plate and concentrated photovoltaic thermal solar collectors
Hydrothermal parameters enhancement of a DTHERX with simultaneous V-cut twisted tape turbulator and air/CuO-water flow usage
Comparison of gasoline and hydrogen pathways in order to reduce the environmental hazards of a solar-hydrogen refueling station; Evaluation based on life cycle cost and Well-To-Wheel models
Flexural Fracture Parameters of Polypropylene Fiber Reinforced Geopolymer
Structural properties of concrete reinforced with bamboo fibers: a review
Life cycle assessment (LCA) of polypropylene fibers (PPF) on mechanical, durability, and microstructural efficiency of concrete incorporating electronic waste aggregates
Response of High-Strength Concrete Beams with Corrugated Discrete Steel Fibers under the Influence of Small Shear Span. Depth Ratios
Optimal Insulation Assessment, Emission Analysis, and Correlation Formulation for Indian Region
Investigating the feasibility of using waste eggshells in cement-based materials for sustainable construction
Experimental investigation and AI prediction modelling of ceramic waste powder concrete . An approach towards sustainable construction

Optimization of Concrete Containing Polyethylene Terephthalate Powder and Rice Husk Ash Using Response Surface Methodology
Predicting parameters and sensitivity assessment of nano-silica-based fiber-reinforced concrete: A sustainable construction material Author links open overlay panel
Two-way Shear Full Behavior of Reinforced Concrete Flat Slabs under Membrane Tensile Forces.
Exergo-economic and exergo-environmental evaluations and multi-objective optimization of a novel multi-generation plant powered by geothermal energy
Sustainability and exergoeconomic assessments of a new MSW-to-energy incineration multi-generation process integrated with the concentrating solar collector, alkaline electrolyzer, and a reverse osmosis unit
Effect of hybrid-fiber- reinforcement on the shear behavior of high-strength-concrete beams
Application of machine learning algorithms to evaluate the influence of various parameters on the flexural strength of ultra-high-performance concrete
Development of a novel geothermal trigeneration system utilizing modified organic-flash cycle and zeotropic mixtures: Environmental assessment and Optimization
Basalt Fiber Reinforced Concrete: A Compressive Review on Durability Aspects
Utilization of Bitumen Modified with Pet Bottles as an Alternative Binder for the Production of Paving Blocks
Shear strength of FRP reinforced deep concrete beams without stirrups: Test database and a critical shear crack-based model
Integration of wind turbine with biomass-fueled SOFC to provide hydrogen-rich fuel; economic and CO2 emission reduction assessment
Computational fluid dynamics simulation of a designed envelop contenting phase change material and imposed solar heat flux and ambient air
Testing and modeling methods to experiment the flexural performance of cement mortar modified with eggshell powder
Performance characteristics of cementitious composites modified with silica fume: A systematic review
Multi-criteria evaluation and optimization of a new multigeneration cycle based on solid oxide fuel cell and biomass fuel integrated with a thermoelectric generator, gas turbine, and methanation cycle
A worldwide development in the accumulation of waste tires and its utilization in concrete as a sustainable construction material: A review
Optimization of Graphene Oxide Incorporated in Fly Ash-Based Self-Compacting Concrete
Feasibility Study on Concrete Made with Substitution of Quarry Dust: A Review
Performance evaluation of fiber-reinforced concrete produced with steel fibers extracted from waste tire
A Review on Failure Modes and Cracking Behaviors of Polypropylene Fibers Reinforced Concrete
Incorporation of Silica Fumes and Waste Glass Powder on Concrete Properties Containing Crumb Rubber as a Partial Replacement of Fine Aggregates
Performance of Strengthened, Reinforced Concrete Shear Walls with Opening
Parametric Study on the Behavior of Steel Tube Columns with Infilled Concrete An Analytical Study
Evaluating Shear Strength of Light-Weight and Normal-Weight Concretes through Artificial Intelligence
Basalt Fibers Reinforced Concrete: Strength and Failure Modes
Optimal Design of Semirigid Connection Steel Frame with Steel Plate Shear Walls Using Dolphin Echolocation Algorithm
A Review on Strength and Durability Properties of Wooden Ash Based Concrete
Mechanical, Durability, and Microstructural Evaluation of Coal Ash Incorporated Recycled Aggregate Concrete: An Application of Waste Effluents for Sustainable Construction
Improvement in Bending Performance of Reinforced Concrete Beams Produced with Waste Lathe Scraps
Effects of Size and Flexural Reinforcement Ratio on Ambient-Cured Geopolymer Slag Concrete Beams under Four-Point Bending
Comparative Study on the Behavior of Reinforced Concrete Beam Retrofitted with CFRP Strengthening Techniques
A Review on Sustainable Concrete with the Partially Substitutions of Silica Fume as a Cementitious Material
Two-Way Shear Resistance of FRP Reinforced-Concrete Slabs: Data and a Comparative Study

Concrete Made with Iron Ore Tailings as a Fine Aggregate: A Step towards Sustainable Concrete
Mechanical, Durability and Microstructure Analysis Overview of Concrete Made with Metakaolin (MTK)
The Mechanical Behavior of Sustainable Concrete Using Raw and Processed Sugarcane Bagasse Ash
Performance of concrete reinforced with jute fibers (natural fibers): A review
Coupled Effect of Polypropylene Fibers and Slag on the Impact Resistance and Mechanical Properties of Concrete
Development of Machine Learning Models for Reliable Prediction of the Punching Shear Strength of FRP-reinforced Concrete Slabs without Shear Reinforcements
Overview of Concrete Performance Made with Waste Rubber Tires: A Step toward Sustainable Concrete
Influence of loading method and stiffening on the behavior of short and long CFST columns
Flexural Strength Prediction of Steel Fiber-Reinforced Concrete Using Artificial Intelligence
Concrete Made with Partially Substitutions of Copper Slag (CPS): A State Art of Review
Evaluation of Axial Compression Slenderness Limits of High and Ultra-High-Strength Steel Circular Hollow Sections
Enhanced Reliability Method for the Two-Way Shear Provisions of the European Code for Lightweight Concrete
Glass Fibers Reinforced Concrete: Overview on Mechanical, Durability and Microstructure Analysis
A Comprehensive Review on the Ground Granulated Blast Furnace Slag (GGBS) in Concrete Production
Evaluate Effect of Various Parameters on the Shear Strength of FRP-Reinforced Concrete Beams with or Without Stirrups
Extended Critical Shear Crack Theory for Punching Shear of Lightweight, FRP-Reinforced, or Prestressed Concrete
ANN Model for Two-Way Shear Capacity of Reinforced Concrete Slabs Without Shear Reinforcements
A Scientometric Review on Mapping Research Knowledge for 3D Printing Concrete
Concrete Reinforced with Sisal Fibers (SSF): Overview of Mechanical and Physical Properties
A Step towards Sustainable Concrete with Substitution of Plastic Waste in Concrete: Overview on Mechanical, Durability and Microstructure Analysis
Data Driven Appraisal for One-way and Two-way Shear Design of Lightweight Concrete and FRP-reinforced Concrete Elements
Reliability-Based Evaluation of Two-way Shear Design Reinforced Concrete Slabs with FRP Reinforcements
Artificial intelligence-based estimation of ultra-high-strength concrete's flexural property
Compressive Strength of Steel Fiber-Reinforced Concrete Employing Supervised Machine Learning Techniques
Mechanical Properties of Hybrid Steel-Polypropylene Fiber Reinforced High Strength Concrete Exposed to Various Temperatures
Experimental Investigations of the Behavior of Stiffened Perforated Cold-Formed Steel Sections Subjected to Axial Compression
Reliability-based assessment and optimization for the two-way shear design of lightweight reinforced concrete slabs using the ACI and EC2
The Novelty of Using Glass Powder and Lime Powder for Producing UHPSCC
Compressive Strength Evaluation of Ultra-High-Strength Concrete by Machine Learning
A Machine Learning Model for Torsion Strength of Externally Bonded FRP-Reinforced Concrete Beams
Shear strength of lightweight and normal-weight concrete slender beams and slabs: An appraisal of design codes
Using Artificial Intelligence Techniques to Predict Punching Shear Capacity of Lightweight Concrete Slabs
A mechanical and simplified model for RC elements subjected to combined shear and axial tension
Punching Shear Strength of FRP-Reinforced Concrete Slabs without Shear Reinforcements: A Reliability Assessment
Evaluation of the Strength of Slab-Column Connections with FRPs Using Machine Learning Algorithms
Punching shear strength and deformation for FRP-reinforced concrete slabs without shear reinforcements
Exploring Effect of In-plane Tensile Forces on the Two-way Shear Strength: review, comparative study and future works

Refining the torsion design of fibered concrete beams reinforced with FRP using multi-variable non-linear regression analysis for experimental results

Design of lightweight concrete slabs under two-way shear without shear reinforcements: a comparative study and a new model

Strength and Ductility of Lightweight Reinforced Concrete Slabs under Punching Shear

Investigating the Behavior of Lightweight Foamed Concrete T-Beams under Torsion, shear, and Flexure

Experimental and numerical investigation of the behavior of LWFC L-girders under combined torsion

Performance of Steel Fiber Reinforced Concrete Corbels

Behavior of stiffened and unstiffened CFT under concentric loading, An experimental study

Chapter :