

PROFESSIONAL DETAILS



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Gender male

Birth Date 1987-12-12

Address Iraq - Zakho

Nationality Iraq

-
- [Zakho Technical Institute](#)
 - [Surveying](#)

LANGUAGE

- **Kurdish** (Native)
- **Arabic** (Intermediate)
- **English** (Intermediate)
- **Russian** (Intermediate)

EDUCATION

Sep, 2020

Master Degree

Surveying (Geomatics) Engineering

Salahaddin University - Erbil

Jun, 2016

Bachelor Degree

Surveying (Geomatics) Engineering

Salahaddin University - Erbil

Jun, 2016

Bachelor Degree

Surveying (Geomatics) Engineering

Salahaddin University - Erbil

Oct, 2012

Diploma Degree

Surveying

DPU - ZTI

Oct, 2012

Diploma Degree

Surveying

DPU - ZTI

TITLE

Apr, 2021

Assistant Lecturer

PROFESSIONAL EXPERIENCE

Feb, 2022 - May, 2022

Zakho Technical Institute

Petroleum Operation and Control

Zakho

Mechanical Workshop

Nov, 2019 - Sep, 2021

Assistant Lecturer

Engineering Unit

Zakho

Member

SKILLS

Microsoft Office:

Microsoft Office

AutoCad: AutoCad

ArcMap: ArcMap

MEMBERSHIP

May, 2021 - Apr, 2022

Examination Committee

member

Zakho Technical Institute

PUBLICATION JOURNAL

Sep, 2022

[Flood Susceptibility Mapping Using Remote Sensing and Integration of Decision Table Classifier and Metaheuristic Algorithms](#)

journal of water (Issue: 19) (Volume: 14)

Flooding is one of the most prevalent types of natural catastrophes, and it can cause extensive damage to infrastructure and the natural environment. The primary method of flood risk management is flood susceptibility mapping (FSM), which provides a quantitative assessment of a region's vulnerability to flooding. The objective of this study is to develop new ensemble models for FSM by integrating metaheuristic algorithms, such as genetic algorithms (GA), particle swarm optimization (PSO), and harmony search (HS), with the decision table

classifier (DTB). The proposed algorithms were applied in the province of Sulaymaniyah, Iraq. Sentinel-1 synthetic aperture radar (SAR) data satellite images were used for flood monitoring (on 27 July 2019), and 160 flood occurrence locations were prepared for modeling. For the training and validation datasets, flood occurrence data were coupled to 1 flood-influencing parameters (slope, altitude, aspect, plan curvature, distance from rivers, land cover, geology, topographic wetness index (TWI), stream power index (SPI), rainfall, and normalized difference vegetation index (NDVI)). The certainty factor (CF) approach was used to determine the spatial association between the effective parameters and the occurrence of floods, and the resulting weights were employed as modeling inputs. According to the pairwise consistency technique, the NDVI and altitude are the most significant factors in flood modeling. The area under the receiver operating characteristic (AUROC) curve was used to evaluate the accuracy and effectiveness of ensemble models. The DTB-GA model was found to be the most accurate (AUC = 0.889), followed by the DTB-PSO model (AUC = 0.844) and the DTB-HS model (AUC = 0.812). This research's hybrid models provide a reliable estimate of flood risk, and the risk maps are reliable for flood early-warning and control systems.

Sep, 2022

[Correlation of the curvatures of equipotential surfaces with measuring the gradient of gravity and the World Height System and its applications in geodesy.](#)

Neuroquantology (Issue: 10) (Volume: 20)

Although the basic principles of curvature are widely understood, there is a relationship to contemporary gravimetric and its associated applications because curvature characterizes the equipotential surfaces, which can provide information about the geometry of a site. This is why the concept of equipotential surface curvature is important both theoretically and practically in measuring the gradient of gravity. Geophysical aspects of exploration continue to be active research areas. This topic can be seen as being closely related to geodesy engineering in general and deals with the relationship between the pillars of geodesy in an applied manner. The topic can be made more general by making it interested in the applications of geodesy engineering rather than just the geophysical aspects that are specifically concerned with terrain.

Oct, 2021

[Local Geoid Model Generation Using the Geometrical Approach](#)

Journal of Civil Engineering and Architecture (Issue: 8) (Volume: 15)

The global navigation satellite systems (GNSS) provide an accurate three-dimensional positioning including the geodetic (ellipsoidal) height (h), which is, in most cases, must be transformed to the local/regional orthometric height (H) to have physically the desired meaning of the elevation above the national vertical datum (e.g., MSL (Mean Sea Level)). Usually, the local orthometric heights are determined based on the value of geoid undulation (N), which is obtained by

methods of gravimetric observations or derived by methods of interpolation utilizing the local geoid models (LGM). The current paper highlights one of the methods of generating LGM that is based on the geometrical relationship between the global datum WGS84 and the Iraqi datum Karbala 1979. The DGPS (Differential GPS) method is used to get the geodetic coordinates of about 97 selected points to cover the experimental area, within the boundaries of Erbil municipality, which has been partitioned into four parts. Therefore, four LGM were generated individually for each one of the four parts with an estimated uncertainty equal to ± 0.076 m.

Jun, 2020

[Gnss Observations to Find The Relationship between The Global Datum World Geodetic System Wgs84 And The Local Datum Karbala 1979. A Case Study of Erbil-duhok Territory](#)

The Journal of Duhok University (Issue: 2) (Volume: 22)

Over the last few years, the Global Navigation Satellite System GNSS was seen as an innovative method in the disciplinary of geodetic engineering as compared to other classic measuring methods. It is familiar to everyone that the height acquired from GNSS observations is the ellipsoidal height (h), which is the distance over the vertical to the global datum World Geodetic System WGS84. The value of (h) is endowed with a physical meaning relating to engineering applications for identification of the orthometric height (H), after the conversion from the global datum to the local datum. So far, in the Iraqi- Kurdistan region, there is no specific local datum that can be utilized to identify the exact orthometric height over a local vertical datum. This research aims to define the relationship between the global datum WGS84 and the Iraqi local datum Karbala 1979 based on ellipsoid Clark 1880, through extracting the Digital Terrain Model DTM for both datums in the case study area (Duhok-Erbil territory). The obtained results show that there is a significant change in the relationship between the two datums over the study area, and the difference between them is propagated between (-1.751 m) up to (+4.236 m) along with this territory. It is found that the two surfaces are intersected at the midway approximately, between Erbil and Duhok.