CURRICULUM VITAE

1. PERSONAL INFORMATION

Name	**Dr. Yousif A. Mousa**
Address (private)	Samawah city, Al Muthanna, Iraq
Mobile	**07714248954**
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E-mail (private)	y.mousa@postgrad.curtin.edu.au
Date of birth	March 15, 1979

2. Research Interests

My background is within the fields of Surveying, Geomatics, Photogrammetry and Remote Sensing. In particularly, I am interest in generation and updating digital maps automatically especially buildings and their outlines. This also included to derive Digital Surface Model (DSM) as well as generation, filtering and analysing of Digital Terrain Model (DTM). My research interests are within those areas which can be applied to a number of practical applications including Terrestrials and Airborne Photogrammetry including mapping using drones, heritage mapping, 3D objects modelling and engineering applications.

3. EDUCATION

- Dates, Name organisation

  2015 – 2020, **Curtin University, School of Earth and Planetary Sciences,** Discipline of **Spatial Sciences, Bentley, WA**

- Title of qualification to be awarded

  Philosophy of Doctorate (**PhD**)

- Principal subjects/occupational skills covered

  Thesis: "**Building Footprint Extraction from LiDAR Data and Imagery Information**"

• Dates, Name organisation	2007-2010**, Baghdad University, Surveying Engineering, Baghdad, Iraq.**
• Title of qualification to be awarded	**Master degree** in Surveying Engineering.
• Principal subjects/occupational skills covered	Thesis: "**Integrating geographic information system database for railways applications**"
• Dates, Name organisation	1996-2007**, Baghdad University, Surveying Engineering, Baghdad, Iraq.**
• Title of qualification to be awarded	**Bachelor degree** in Surveying Engineering.

4. **ACADEMIC EXPERIENCES**

h-index	**Scopus: 2, Google: 2**
Software and Programming skills	• Proficient with several software such as GIS, QGIG, Photo Scan, Context Capture and 3DM Analyst. • Proficient programmer in MATLAB and Python.
• Dates	Dec/2010 – Present
• Name and address of employer	**College of Engineering, Al-Muthanna University, Iraq.**
• Occupation or position held	• **Lecturer** • **Unit coordinator**: Engineering Surveying Course for the Bachelor students. Various surveying theories and practices apply to engineering and construction projects including: Levelling, Traversing, GPS surveying, Vertical and Circular curves. Survey techniques and calculation methods (e.g. Area and volume) are also covered in this unit.

• Dates	01/03/2016 – 31/07/2020
• Name and address of employer	**Discipline of Spatial Sciences, Curtin University** GPO Box U1987, Perth WA 6845, Australia
• Occupation or position held	**Casual academic/tutor:** The units I tutor are Photogrammetry, Applied Cartography and Advanced Photogrammetry for Bachelor of Surveying students. The units are 2nd year and 3rd year units within the B-Surv degree at the School of Earth and Planetary Sciences, Discipline of Spatial Sciences, Bentley, WA. Photogrammetry: - 2nd year unit - Topics: 3D reconstruction of scenes using drone images - includes all aspects of the workflow from calibration to deriving explicit plans and measurements (e.g. volumes calculation). Applied Cartography: - 2nd year unit - Includes Thematic mapping using Open Data as well as "client" specific information using the QGIS platform. Advanced Photogrammetry: - 3rd year unit - Topics: programming of a photogrammetric workflow including relative and absolute orientation applying a least squares adjustment in MATLAB.

5. NON-ACADEMIC EXPERIENCES

• Dates	**May**/2021 – Present
• Name and address of employer	**Al-Muthanna University, Iraq**
• Occupation or position held	• Member in a scientific research group established by the Scientific Affairs Department in Al-Muthanna University. The goal is to study and analyse the main reasons that caused the drought of Sawa Lake and to find possible solutions.

• Dates	(June/2020 – Oct. /2020)
• Name and address of employer	**The Curtin HIVE (Hub for the immersive visualization and eResearch). Curtin University, Bentley, WA**
• Occupation or position held	**Research Assistant.** The project aims to create 3D reconstruction model of the "Santo Antonio de Tanna" shipwreck using trilateration procedure and least squares adjustment. In addition, conducting a comparison between the trilateration 3D Model with a photogrammetric model created in 2018.
• Dates	(Nov/2019 - Feb/2020)
• Name and address of employer	**The Curtin HIVE (Hub for the immersive visualization and eResearch). Curtin University, Bentley, WA**
• Occupation or position held	**Internship research project.** The project aims to re-map of the Canning River based on historical survey notes and plans established in 1841. This includes coordinates transformation and geolocation procedure using MATLAB and QGIS. It is also aim to create a visualisation that is suitable for non-experts to see the workflow of the mapping process and to experience the Canning River back the (1841) and today using the Unity software.
• Dates	July/2010 – Dec/2010
• Occupation or position held	Supervising GIS work of Urban planning of Muthanna Governorate. This work includes providing consultation for designing of the master urban expansion plan for the Muthanna/Samawah city.

6. SERVICE ACTIVITIES

• Reviewing articles for the following journals	1. international journal of applied earth observation and geoinformation (Publisher: Elsevier BV, Netherlands). 2. Remote Sensing of Environment (Publisher: Elsevier BV, Netherlands).

3. Photogrammetric Engineering and Remote Sensing (American Society for Photogrammetry and Remote Sensing)

7. PUBLICATIONS

Mousa, Y. A.-k. (2020). Building Footprint Extraction from LiDAR Data and Imagery Information, Curtin University. http://hdl.handle.net/20.500.11937/79920

Helmholz, P., Mousa et al. (2020). "GEO-LOCATING HISTORICAL SURVEY DATA AND IMAGES – A CASE STUDY FOR THE CANNING RIVER, PERTH, WESTERN AUSTRALIA." Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci. **XLIII-B4-2020**: 575-582.

Mousa, Y. A., Helmholz, P., Belton, D., & Bulatov, D. (2019). Building detection and regularisation using DSM and imagery information. The Photogrammetric Record, 34(165), 85-107. http://dx.doi.org/10.1111/phor.12275

Mousa, Y. A., P. Helmholz, and D. Belton, "New dtm extraction approach from airborne images derived dsm," vol. 42, no. 1W1, 2017, pp. 75–82.