

SAFAA ZAKARIA KARAKI ALDWAIK

Ramallah, Palestine
Cell + (972) 592-909004
Email saldwaik@gmail.com
Updated 21 June, 2023

EXPERTISE

Urban Planning
Land Change Science
Geographic Information Science (GIS)
Disaster Risk Management
Smart Cities & E-services
Spatial Statistics
Remote Sensing

EDUCATION

Doctor of Philosophy in Geography, 2012

Major: Geographic Information Sciences, First Minor: Land Use/ Cover Change Analysis, Second Minor: Remote Sensing

Clark University
The Graduate School of Geography
Worcester, MA, USA

authored dissertation entitled “Fundamental Concepts of Intensity Analysis to Understand Changes Among Categories” **GPA: 3.99**

Master of Arts - Geography, 2010

Clark University
The Graduate School of Geography
Worcester, MA, USA

authored thesis entitled “Measurement of Land Transformation Over Time”

Master of Arts - Geographic Information Sciences for Development and Environment (GISDE), 2007

Clark University
Department of International Development, Community, and Environment (IDCE)
Worcester, MA, USA

authored thesis entitled “The Corridor: Using GIS to Propose Satisfactory Transportation Paths between the West Bank and Gaza” **GPA: 4.05**

Bachelor of Engineering - Architectural Engineering, major: Urban planning, 2002

Birzeit University
College of Engineering
Ramallah, West Bank, Palestine

PROFESSIONAL TRAINING

Digital Government & Smart City for Resilience, November – December 2020

Joint Online Course on what serves to build up resilience in digital government and how to be responsive when cities are faced with social crises

International Telecommunication Union
NIA Global Academy
World Smart Sustainable Cities Organization (WeGO)

Making Cities Resilient: Developing and implementing local disaster risk reduction strategy to respond to COVID-19 and to better prepare for the future, September – October 2020

Joint Online Course

UN Office for Disaster Risk Reduction (UNDRR)
Global Education and Training Institute (GETI)
UN Office for South-South Cooperation (UNOSSC)
Pan American Health Organization (PAHO)

AppStudio for ArcGIS, April – May 2020

Online Course
ESRI

Change Management, March 2016

Galaxy Training Center
Jericho, Palestine

Disaster Risk Management, August 2014

80 hours of theoretical and practical input on disaster risk management and disaster response covering the whole disaster management cycle.

Humboldt-Universität zu Berlin
Landwirtschaftlich-Gärtnerische Fakultät
Centre for Rural Development (SLE)
Berlin, Germany

Using ArcGIS for Geospatial Intelligence, Jun2 2010

24 hours of training about geospatial concepts and recommended workflows that support the production of timely, accurate, and actionable intelligence.

Online course from ESRI (www.esri.com), taken on Clark University campus, Worcester, MA, USA

WORK EXPERIENCE

CTO, Director of GIS & IT Department, 2013 - present

Ramallah Municipality
Ramallah, West Bank
City Executive Team Member
Member of “Ramallah Resilience Strategy 2050” Committee
Manage 3 Sections: GIS Section, MIS Section, E-Services Section
Project manager: Ramallah Strategic Plan 2023-2026, Ramallah Smart City,
Smart Public Schools, E-services, Feild Comprehensive Survey

Senior GIS Specialist, 2012 - 2013

Institute for Palestine Studies (IPS)
Ramallah, West Bank

- develop an enterprise-wide GIS system to document, view, query, understand, question, analyze, and interpret historical maps and events,
- create computer program to help historians in solicit information and export them in form of maps, reports, and charts
- communicate and report on development results to steering committee

GIS and e-Municipality Consultant, 2012 - 2013

Ramallah Municipality
Ramallah, West Bank

Head of GIS & IT Section, 2010 - 2012

Ramallah Municipality
Ramallah, West Bank

- Manage 5 Units: GIS Unit, Naming and Numbering Unit, Statistics Unit, MIS Unit, E-Services Unit
- establish the first GIS Municipal System in Palestine www.ramallah.ps/GIS
- perform assesment and develop detailed action plan to convert the entire municipal servies to e-Services
- design Ramallah Smart City project
- lead the first House Numbering project in Palestine
- utilize ArcGIS Network Analyst methods to create network-based spatial tool for routing, travel directions, closest facility detector, and location-allocation

Teaching Assistant for Professor Robert Pontius, Spring 2010

Advanced Raster GIS (IDCE396)
Clark University
Worcester, MA, USA

Research Assistant for Professor Robert Pontius, Fall 2009

Clark University
Worcester, MA, USA

- create the Intensity Analysis methods to characterize land cover changes, identify stationarity of transitions over time, apply it for several sites of the National Science Foundation's Long Term Ecological Research network (<https://sites.google.com/site/intensityanalysis/>)
- create computer programs using VBA programming language to perform the same quantitative analysis for all participating sites (being used across continents)

Teaching Assistant for Professor Yelena Ogneva-Himmelberger, Spring 2009
Advanced Topics in GIS (GEOG 397)
Clark University
Worcester, MA, USA

Architect and Site Manager, 2005 - 2006
Palestine Red Crescent Society (PRCS)
Al Bireh, West Bank

Architect and Interior Designer, 2003 - 2005
Al-Moghrabi Engineering Consultant Office
Ramallah, West Bank

Full time Lecturer, 2002 - 2003
Palestine Polytechnic University
Hebron, West Bank

- taught Principles of Planning and Design, Building Constructions, Construction Management, and Architectural Design
- participated in designing the curriculum for Graphic Design Course

AWARDS AND HONORS

Member in the the UN Global Homelessness Data Initiative Advisory Committee

Under the coordination of IGH and UN-Habitat, my role is to provide technical and strategic advice to the design of a comprehensive multi-layered global homeless enumeration strategy, to observe the implementation of the overall strategy for global homeless enumeration, and to help Member States use and share data to devise evidence-based policies to reduce and end homelessness.
June 2021 - present

Special Achievement in GIS Award (SAG), ESRI

Awarded SAG for exceptional application of geospatial technology in Ramallah Municipality. This award acknowledges vision, leadership, hard work and innovative use of Esri's geographic information system technology,
July 2015, San Diego CA, USA

National Committee for E-municipalities Member

Appointed by Palestinian Council of Ministers as a member in this Committee to identify needs and implementation requirements for E-municipalities (Palestinian Council of Ministers decision number (F.S/O.M/14/13/04), 2012 - 2015

Training Fund, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Awarded fund to take Disaster Risk Management course at Humboldt-Universität zu Berlin in Germany, August 2014

Graduate Fellowship, Graduate School of Geography at Clark University

Awarded tuition fellowship and support stipend to earn PhD's Degree at Clark University, 2008 – 2012

Conference Fund, Graduate School of Geography at Clark University

Awarded fund to participate in the Association of American Geographers meeting, 2010

CHANS Fellowship, International Network of Research on Coupled Human and Natural Systems; supported by the U.S. National Science Foundation

Awarded an Outstanding Junior Scholar certificate and fund to participate in the 2010 Association of American Geographers meeting to present the method for cross-site comparison, October 2009
Washington DC, USA

Site Participant Award, Long Term Ecological Research network

Awarded full fund to participate in the ALL scientists meeting to present my method that perform quantitative analysis for land transitions; in addition to present three posters, September 2009
Denver, Co, USA

1st Place in the 2007 First Annual URISA Student Paper Competition, Urban and Regional Information Systems Association, USA

Received cash award
Awarded free conference registration and recognition at the URISA 2007 Annual Conference in Washington DC

Conference Fund, U.S. Agency for International Development

Awarded full fund to participate in the Association of American Geographers meeting: present a paper, 2007
San Francisco, CA, USA

Presidential Scholarship, U.S. Agency for International Development

Awarded full scholarship to earn Master's Degree in USA, 2006 - 2007

Birzeit University Honor & Tuition Awards

Received three tuition awards and honor certificates, 1998-2002

PUBLICATIONS

Aldwaik S. Z., J. A. Onsted and R. G. Pontius (2015) *Behavior-based Aggregation of Land Categories for Temporal Change Analysis*. International Journal of Applied Earth Observation and Geoinformation, Vol. 35, Issue B, pp.229-238

Aldwaik S. Z. and R. G. Pontius (2013). *Map errors that could account for deviations from a uniform intensity of land change*. International Journal of Geographical Information Science, Vol. 27, Issue 9, pp. 1717-1739

Aldwaik S. Z. and R. G. Pontius Jr (2012). *Intensity Analysis to Unify Measurements of Size and Stationarity of Land Changes by Interval, Category, and Transition*. Landscape and Urban Planning, Vol. 106, pp. 103-114

Aldwaik, Safaa Zakaria (2012). *Fundamental Concepts of Intensity Analysis to Understand Changes Among Categories*. ProQuest Dissertations & Theses, 131 pages; 3531750

Aldwaik, Safaa Zakaria (2007) *The Corridor: Using GIS to Propose Satisfactory Transportation Paths between the West Bank and Gaza*. The Arab World Geographer, Vol. 10, no. 1

REVIEWER FOR PROFESSIONAL SCIENTIFIC JOURNALS

International Journal of Geographical Information Science

Landscape Ecology

Remote Sensing of Environment

Environment and Urbanization

Science, Technology and Development

African Journal of Agricultural Research

Regional Environmental Change

PROJECTS

- Smart Ramallah Public Schools (2014-present)
- Ramallah Smart City (2013-present)
- Ramallah e-Municipality (2013-2018)
- House Numbering of Ramallah's Buildings (2011-2013)
- Automating Category Aggregation to Focus on Important Transitions (2009 - 2011)
- Identifying Stationarity of Transitions Among Land Categories Over Time (2008 - 2010)
- Let Them See: Browser-based Visualization of User Query of Large Geographic Datasets (2009)
- Random Number Generator for HERO's Social Science Surveys (2008)
- The Corridor: Using GIS to Propose Satisfactory Transportation Paths between the West Bank and Gaza Strip (2006 - 2007)
- An Evacuation Model for Cape Cod, Massachusetts: Evaluating Three Scenarios (2006)
- Controlling Development: The Contradictory Effects of the Creation of the Palestinian National Authority on the Land Use/Cover in Ramallah and East Jerusalem, 1987 - 1999 (2006)
- A Cleaner Worcester (2006)
- Safaa designed Residential and Public Buildings, and Interior Spaces using AutoCAD 2d & 3d (2003 - 2006)
- East Jerusalem: Preserving Cultural Identity and Heritage during Developments Required to Absorb Fast-Growing Population (2001 - 2002)

PROFESSIONAL MEMBERSHIPS

UCLG-MEWA Committee on Smart Cities
National Committee for E-municipalities
Association of American Geographers
Long Term Ecological Research Network
International network of research on Coupled Human and Natural Systems
Human Dimensions of Global Change Specialty Group
Arab World Geographer
Palestinian American Research Center
Jordan Engineers Association
Palestine Red Crescent Society

LANGUAGES

Arabic (native), English (fluent), Hebrew (fair)

REFERENCES

Eng. Mousa Hadid,

Former Mayor of Ramallah (2012-2022)
Ramallah Municipality, 4 Issa Zeiadeh Street, Ramallah WB 600 Palestine
e-mail: musahadid2022@gmail.com
telephone: +970 2 2945555 ext: 102
mobile: +970 59 345670
fax: +970 2 2963214

Dr. Camille Mansour,

Secretary General, Board of Trustees and Chair of Research Committee
Institute for Palestine Studies, 14 Rue Le Bouvier, 92340 Bourg La Reine, France
e-mail: camille.mansour@gmail.com
telephone : +33 6 514 71 528

Dr. Robert Gilmore Pontius, Jr

Professor of Geography
Clark University, 950 Main Street, Worcester MA 01610 USA
e-mail: rpontius@clarku.edu
telephone: 001 508 793 776
fax: 001 508 793 8881