

Dr. Tamer Ali Al-Sabbagh

Associate Professor of Economic Geography & GIS Specialist

Head of Geography Department Higher Institute for Literary Studies, King Mariout – Alexandria (Current)

Contact Information

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Academic Profile

Associate Professor with 18+ years of experience at the intersection of spatial analysis, urban systems, and applied GIS. Proven record of publishing in high-impact international journals and delivering policy-relevant spatial models for urban planning authorities. Expertise spans spatial econometrics, geospatial decision support systems, and advanced geodatabase architectures in large-scale institutional environments.

Research Metrics

- Publications: 6+ indexed international papers
 - Citations: 58
 - h-index: 4
 - Journals: GeoJournal, Land Use Policy, Socio-Economic Planning Sciences, IJAEOG
 - Research Areas: Spatial Analysis, Urban Planning, GIS Modeling, Terrorism Geography
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Academic Appointments

Acting Head of Geography Department

Higher Institute for Literary Studies, King Mariout – Alexandria (Current)

Associate Professor of Geography

Higher Institute for Literary Studies, King Mariout – Alexandria

Teaching Experience

Courses taught include:

- Advanced GIS Applications
 - Spatial Analysis & Spatial Statistics
 - Economic Geography
 - Urban Geography & Planning
 - Political geography
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Professional Experience

GIS Consultant (Urban Planning Department)

Royal Commission for Yanbu (RCY), Saudi Arabia

- Delivered spatial decision-support models for infrastructure and urban expansion.
- Led the modernization of geospatial database systems, transitioning from conventional editing workflows to Parcel Fabric architecture.
- Developed automated geoprocessing models for routine spatial operations, enhancing efficiency and data integrity.

GIS Analyst / Arcsde Administrator

Horizon Company (RCY) | 2015–2017

- Managed enterprise geodatabases and multi-user spatial systems.
- Developed spatial statistical workflows and QA/QC frameworks.

ArcGIS / Arcsde Specialist

Al-Bukayriyah Municipality | 2011–2015

- Managed land-use planning and geospatial infrastructure systems.

ArcGIS Specialist

Abha Amana | 2008–2011

- Built geodatabases and managed commercial GIS systems.
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Education

Ph.D. in Geography (GIS)

Benha University, 2016

M.A. in Geography

Ain Shams University, 2010

B.A. in Geography

Tanta University, 2003

Research Interests

- Spatial Econometrics (SAR, SDM, GWR)
 - Urban Systems & Location Theory (CPT/CFT)
 - GIS-based Decision Support Systems
 - Terrorism & Spatial Risk Modeling
 - Remote Sensing & Environmental Analysis
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Technical Expertise

Advanced (Expert Level):

- ArcGIS Pro, ArcGIS Desktop, Spatial Analysis
- Arcsde & Enterprise Geodatabases
- Spatial Statistics & Modeling

Intermediate:

- Python (Arcpy), SPSS
- AutoCAD Map, MapInfo

Advanced Methods:

- Spatial Autocorrelation (Moran's I, LISA)
 - Kernel Density Estimation (KDE)
 - Spatial Co-location Analysis (LCLQ)
 - Z-score Standardization
 - Shannon Diversity Index
 - Spatial Modeling (basic exposure to SAR/SDM concepts)
 - MCDM & Fuzzy Logic
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Selected Publications

- Al-Sabbagh, T.A. GIS location-allocation models in improving accessibility to primary schools in Mansura city-Egypt. *GeoJournal* 87, 1009–1026 (2022). <https://doi.org/10.1007/s10708-020-10290-5>
 - Al-Sabbagh, T. A., Li, Y., Lee, Y. J., & El Kenawy, A. M. (2023). Land use and sexual harassment: A geospatial analysis based on the volunteer HarassMap-Egypt. *Geographical Research*. <https://doi.org/10.1111/1745-5871.12619>
 - Al-Sabbagh, T.A., Almuqataf, M.M., Elsaed, E.L. et al. Advanced GIS and fuzzy logic integration for strategic fire station placement in Yanbu industrial city, Saudi Arabia. *GeoJournal* 90, 59 (2025). <https://doi.org/10.1007/s10708-025-11304-w>
 - Bahaa Mohamadi, Mohamed O. Abu Ghazala, Huxiong Li, Tamer A. Al-Sabbagh, Ali Younes, Integrating InSAR coherence and air pollution detection satellites to study the impact of war on air quality, *International Journal of Applied Earth Observation and Geoinformation*, Volume 142, 2025,104687, ISSN 1569-8432, <https://doi.org/10.1016/j.jag.2025.104687>.
 - Al-Sabbagh, Tamer A., et al. "Land use as a target for terrorism: A geospatial and temporal framework of terrorist preferences analysis in Egypt." *Land Use Policy* 160 (2026): 107822.
 - Younes, A., Ghazala, M. O. A., Al-Sabbagh, T. A., Eid, H. N., & El-Shenawy, M. A. (2025). Spatial suitability and facility location planning for ammunition depots in Egypt: An integrated GIS-based MCDM approach. *Socio-Economic Planning Sciences*, 102354.
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- Al-Sabbagh, T.A.; Eid, H.N.; Ahmed, A.A.; Younes, A.; El-Shenawy, M.A. Centrality, Flow, and Spatial Inequalities in Urban Food Services: Evidence from a Global South City-Tanta, Egypt. *Geographies* **2026**, *6*, 53. <https://doi.org/10.3390/geographies6020053>

Academic Service

Reviewer for:

- GeoJournal
- Transactions in GIS
- Geographical Research
- Humanities & Social Sciences Communications

Key Strengths

- Integration of theory (CPT/CFT) with spatial modeling
- Bridging academic research with real-world planning
- Advanced spatial-statistical modeling for policy applications

Major Projects

Geodatabase Modernization – Royal Commission for Yanbu (RCY), Saudi Arabia

- Led the transition from conventional GIS editing workflows to the Parcel Fabric data model within an enterprise geodatabase environment.
- Designed and implemented automated geoprocessing models for routine operations (editing, validation, topology checks), significantly improving workflow efficiency.
- Enhanced data integrity, version control, and governance through advanced Arcsde administration and QA/QC protocols.

Professional Vision

To advance spatial analytical frameworks in urban and regional systems through the integration of GIS, spatial econometrics, and decision-support modeling, contributing to evidence-based planning and sustainable urban development