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Geospatial Information Technologies specialist with over 20 years of experience in GIS and spatial decision making and their applications. Has a BS in Architecture Engineering, a Masters in Computer Science, a Post Graduate Diploma in Disaster Management and a doctorate in Geography. Has published and presented extensively; accomplishments include a text book in remote sensing, several refereed papers in leading GIS and remote sensing journals and chapters in and lead authorship of prominent GIS and remote sensing books, and manuals and technical reports presented internationally. Experienced leader and manager having variously served as Business Development Consultant, Technical Advisor, Associate Director and President. International GIS project and technical development and management experience in Egypt, Ghana, Jordan, Kuwait, Saudi Arabia, Oman, Emirates, Qatar, Afghanistan, Croatia, UK and USA. Former certified instructor for introductory and advanced GIS software with profound expertise in GIS education. Award-winner of numerous national and international awards including the prestigious Gilbert White Award for the best hazards dissertation from the Association of American Geographers, Young Scholar Award from the Consortium of Geographic Information Science, and a GIS Award from the Urban and Regional Information Systems Association. Served for 2 years as a Secretary of the Consortium of Geographic Information Science (UCGIS), and for 4 years as a Board Director in the Central Region of the American Society for Photogrammetric Engineering and Remote Sensing (ASPRS). He is also a co-founder of Urban Remote Sensing specialty group of the European Association of Remote Sensing Laboratories (EARSeL). Holds professional membership in several professional and scientific organizations.

EDUCATION

Ph.D., Department of Geography, University of California at Santa Barbara and San Diego State University, California 2002.

Post Graduate Diploma, Disaster Management, University of Geneva, Switzerland, 2000.

M.S., Computation, University of Manchester Institute of Science, United Kingdom, 1998.

B.S., Architectural Engineering, University of Assiut, Egypt, 1993.

PROFESSIONAL HISTORY

01/2011-Present

Lecturer and Affiliated Researcher with USC Spatial Science Institute, University of Southern California, Los Angeles, CA, USA. Teaching and advising students in the USC online Geographic Information and Technology master's program.

Geospatial Applied Research Experts House

- 10/2010-Present** Geospatial Technology Consultant, The World Bank, Washington D.C. (USA), Croatia, Bosnia. Overseeing and advising on the technical aspects related to the tendering process and implementation of two country-wide projects. The first is a GIS-based health-care planning system. The second is a GIS-based ambulance services.
- 05/2010-Present** Chief Scientist and Founding President, GSAREH LLC, Texas, USA. GSAREH LLC is a geospatial R&D and Consulting Company based in Austin, TX that offers a range of services including the development of GIS solutions based on cutting edge research in academic, technology consulting strategic planning, and capacity building programs.
- 08/2009-04/2010** Senior Scientist, Milcord LLC, Waltham, MA, USA. Developed proposals and led the implementation of an R&D project related to using GIS in support of US counter insurgency activities in Afghanistan.
- 09/2003-06/2009** Assistant Professor, Department of Geography, The University of Oklahoma, Norman, OK, USA. Taught introductory and advanced courses in GIS, remote sensing, and disaster risk management. Mentored and advised several students at the Masters and PhD levels. Secured and managed research grants in the fields of GIS and remote sensing. Was the Associate Director of the Center for Spatial Analysis and managed the operations of its projects and outreach divisions.
- 01/2008-06/2009** Senior GIS Consultant, ESRI Northeast Africa (NeA), Middle East. Developed the company business plan for 2009-2012. Was the senior technical advisor for a number of projects carried out in the middle east. Was a project manager for a large-scale homeland security project implemented by the ministry of interior in Qatar.
- 01/2003-08/2003** Assistant Professor and Technical Coordinator of the International Masters Program in GIScience, University of Redlands, Redlands, CA, USA. Developed the program's curricula to leverage the technical competencies of the students. Taught introductory and advanced courses in GIS.
- 09/1998-08/2003** Teaching/Research Assistant, Department of Geography, San Diego State University, CA, USA. Provided technical assistance (including database design and programming) to a number of GIS and remote sensing research projects carried out by faculty members.
- 08/1995-08/1997** Senior GIS Specialist, GIS Distributer in Egypt, Cairo, Egypt. Led the application development team in the professional services unit. Delivered professional training for Esri software.
- 08/1993-07/1995** GIS Specialist, Information and Decision Support Center (IDSC), the Egyptian Cabinet, Cairo, Egypt. Worked in several GIS projects carried out by the GIS Unit at the IDSC.
- SHORT-TERM CONSULTANCIES**
- 9/2013 – Present** Leading a consulting group to assess the needs cross-agency requirements for the Madinah Spatial Data Infrastructure project with Al-Madinah Development



Agency, Saudi Arabia.

- 3/2013 – Present** Leading a consulting group to assess the needs and existing business workflows for the new comprehensive planning support system for Medina Development Agency in Saudi Arabia. The effort also includes design optimized workflow, development of software requirement specifications document, and design of a planning support system that will be used to manage, monitor and support the implementation of the comprehensive plan.
- 6/2012 – 9/2012** Conducted a desk study for USTDA to assess and justify whether or not US Trade and Development Agency should provide funding for a proposed pilot study, technical assistance and other trade capacity building activity regarding Smart City implementation in China. The scope of work included provision and supporting analysis and recommendation on such issues as export potential, impact on US labor, environmental impacts, development impacts, as well the development of the ToR.
- 06/2011-Present** City of Austin, Austin, Texas. Provided GIS Public Health Training. Led a capacity building program for developing and delivering customized training materials to Public Health practitioners and City officials.
- 03/2011-Present** Integrated Emergency Medical Services for Croatia [Place of Performance]. Consultant to a World Bank sponsored project to develop a road map for, and subsequently implement, a fully operational ambulance services system for Croatia using GIS and Tetra network.
- 10/2010-Present** Integrated Flood Risk Management System for Province Qassiem in Saudi Arabia [Qassiem, KSA]. Principal Investigator of a 2 years phased project (totaling over \$4 million) to develop a road map for, and subsequently implement, a fully operational Flood Forecasting and Early Warning System, including hardware, software, Geographic Information Systems (GISs), Relational Database Management Systems (RDMSs), sensors, weather and water monitoring equipment, communications equipment, and modeling systems.
- 09/2010-Present** Country Wide Health Business Intelligence System for Croatia [Place of Performance]. Consultant to a World Bank sponsored project to support technical development and the ToR for the Government of Croatia to establish a nationwide GIS-based Health Business Intelligence System as part of their ongoing health reform.
- 09/2010-12/2010** Cancer Geographic Awareness in the USA [Place of Performance]. Worked with Dr. Naci Dilekli to develop a web-based GIS tool for fusing, analyzing, and reporting data and maps pertaining to cancer at the county and state levels for the entire USA in response to a Health Challenge from the National Cancer Institute (NCI). The tool won an award from NCI and was featured in the media, online several professional health and GIS forums, and professional health meetings.
- 09/2009-05/2010** Predictive Indicators of Social Radicalism in Afghanistan [Place of Performance].



Senior Research Scientist on a project performed by Milcord LLC (DoD Contract), and aimed to design and implement a spatial multicriteria decision making tool to support civil stability projects by US Army as part of their counterinsurgency operations and irregular warfare in Afghanistan.

- 02/2009-07/2009** Unified Geospatial Infrastructure for Qatar Ministry of Interior [Doha, Qatar].
Consultant and project manager for overseeing the analysis and design conducted by ESRI Northeast Africa team contracted to implement a geospatial solution for homeland security and public safety for the State of Qatar.
- 05/2008-Present** A Landownership Management Tool in support of Wildlife Management Activities at the Oklahoma Department of Wildlife Conservation [Norman, Oklahoma]. Principal investigator for a project that is developing a landownership management system in support of related activities carried by biologists within the Wildlife Division at the ODWC.
- 01/2007-12/2008** Design and Implementation of a Public Participatory Geospatial Web Portal for Reporting and Updating Fish Lake Records [Norman, Oklahoma]. Principal investigator for a Web-based GIS project sponsored by Oklahoma Department of Wildlife Conservation to support the development of a participatory geospatial web portal for engaging the community of users outside the ODWC in reporting and updating lake record fish data in Oklahoma.
- 12/2005-07/2006** SPACE Training Program, University of California Santa Barbara [Norman, Oklahoma]. Principal investigator and coordinator of a national workshop titled "Remote Sensing and GIS Technologies for Undergraduate Curricula in the Social Sciences" to be held at the University of Oklahoma in July 23-28, 2006. The workshop is funded by the SPACE program through a grant from the National Science Foundation in the USA.
- 12/2005-04/2006** Oklahoma Department of Wildlife Conservation (ODWC) Project [Norman, Oklahoma]. Contracted for the design and implementation of an organizational-wide geodatabase design and an internet mapping server (<http://fishlab.ou.edu/odecims>) for the ODWC in Norman, Oklahoma, USA.
- 12/2005-03/2006** Geospatial Educational Alliance (GEA) for Afghanistan [Kabul, Afghanistan]. Consultant for the GEA program funded by the USAID to perform needs analysis and help establish partnerships between Afghan and American higher education institutions in GIScience education.
- 05/2005-12/2005** Remote Sensing Expert and Consultant to the Disaster Information Management System (DIMS) project, Afghanistan Information Management Service, United Nations Development Programme (UNDP), Afghanistan. Provided technical advisory for the DMIS and early warning system pilot project implemented by the UNDP in Afghanistan. Responsibilities included advising on the appropriate data sources, sensors and scales at which to gather and analyze data for monitoring and assessing hazards, vulnerability, and risks; developing ToRs for the hazards, vulnerability and risks assessments; and undertaking hazards, vulnerability and risks assessments using a multi-hazard approach on top of geospatial technologies.
- 06/2004-06/2006** Virtual Luxor Project [Luxor, Egypt]. Principle investigator of a pilot study for the



development of online 3D-GIS models for a small subset of historical sites in the city of Luxor (ancient Thebes), Egypt, on top of Intergraph GeoMedia technologies. The project was sponsored by the University Consortium for Geographic Information Science through a grant from Intergraph Ltd.

12/2002-06/2003

Consultant to the GIS Watershed Initiative (performed through Redlands Institute), Colorado River Basin Regional Water Quality Control Board Region7, Palm Springs, USA. Lead the effort of the design and implementation of a GIS strategic plan and enterprise GIS solution for the Regional Water Quality Board (Region 7) in California.

09/1999-12/2002

The Arab Fertility Project [San Diego, CA]. Involved in projects funded by the National Science Foundations that focused on applications of remote sensing and GIS to modeling relationships between demographic dynamics and land cover change in Egypt and Jordan.

PUBLICATIONS

- Weeks, J., Gadalla, M., Rashed, T., Stanforth, J. and Hill, A., 2000. Spatial Variability in Fertility in Menoufia, Egypt, Assessed Through the Application of Remote-Sensing and GIS Technologies. *Environment and Planning A*, 32(4): 695-714.
- Rashed, T., Weeks, J., Gadalla, M. and Hill, A., 2001. Revealing the Anatomy of Cities through Spectral Mixture Analysis of Multispectral Satellite Imagery: A Case Study of the Greater Cairo Region, Egypt. *Geocarto International*, 16 (4):5-16.
- Rashed, T., Weeks, J., Roberts, D., Rogan, J., and Powell, R. 2003. Measuring the Physical Compositions of Urban Morphology using Multiple Endmember Spectral Mixture Models. *Photogrammetric Engineering & Remote Sensing*, 69 (9):1011-1020.
- Rashed, T. and Weeks, J., 2003. Assessing Vulnerability to Earthquake Hazards through Spatial Multicriteria Analysis of Urban Areas. *International Journal of Geographic Information Science*, 17(6):549-576.
- Rashed, T. and Weeks, J., 2003. Exploring the Spatial Association Between Measures from Satellite Imagery and Patterns of Urban Vulnerability to Earthquake Hazards. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Vol XXXIV-7/W9:144-152.
- Weeks, J., A. Getis, A. Hill, M. Gadalla and T. Rashed 2004. The Fertility Transition in Egypt: Intra-Urban Patterns in Cairo. *Annals of the Association of American Geographers* 94: 74-93.
- Rashed, T. 2004. Quantifying the Ecological Patterns of Urban Densification through Multiple Endmember Spectral Mixture Analysis, Landscape Metrics, and Fuzzy Logic. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Vol XXXV-B7:503-508
- Rashed, T., J. Weeks, D. Stow, and D. Fugate 2005. Measuring Temporal Compositions of Urban Morphology through Spectral Mixture Analysis: Toward a Soft Approach to Change Analysis in Crowded Cities. *International Journal of Remote Sensing*, 26 (4):699–718.
- Rashed, T., 2005. Geospatial Technologies, Vulnerability Assessment, and Sustainable Hazards Mitigation in Cities. In M. Campagna, editor, *GIS for Sustainable Development: Bringing Geographic Information Science into*



Practice towards Sustainability, Taylor and Francis (CRC Press), New York: 287:309.

- James, A. M.** and T. Rashed 2006. In Their Own Words: Utilizing Weblogs in Quick Response Research. In G. Guibert (editor) Learning from Catastrophe: Quick Response Research in the Wake of Hurricane Katrina, Natural Hazards Center Press, University of Colorado, Boulder: 57-84.
- Rashed, T., J. Weeks, H. Couclelis, and M. Herold 2007. An Integrative GIS and Remote Sensing Model for Place-Based Urban Vulnerability Analysis. In V. Mesev (editor), Integration of GIS and Remote Sensing, Wiley (chapter 9): 199-231
- Rashed, T., 2008. Remote Sensing of Within-Class Changes in Urban Neighborhood Structures. Computer, Environment and Urban Systems 32 (5): 343-354
- Rashed, T. and Juergens, C. (editors) 2010. Remote Sensing of Urban and Suburban Areas. Series: Remote Sensing and Digital Image Processing, Vol. 10. Series Ed.: Meer, Freek D. van der. Springer.

REPORTS

- Rashed, T. 2003. Report on the 4th International Symposium on Remote Sensing of Urban Areas, Regensburg, Germany from 27-29 June 2003. ISPRS Highlights, 8(3): 19-20
- Rashed, T. 2005. A Roadmap for Afghanistan: A Partnership-Based Roadmap to Address the Nation's Need for Higher Education in the Geographic Information Sciences. Geoconneexion International Magazine, 4(9): 26-27.
- Rashed, T. 2005. Sustainable Mitigation of Hydrometeorological Disasters for Cities in Afghanistan. (Technical Report Submitted to the United Nations Development Programme).
- Rashed, T. & Rich, K 2006. Existing Situation and Needs Assessment for Migrating the ODWC DAT VIEWER to In-House Internet Map Server (Technical Report Submitted to the Oklahoma Department of Wildlife Conservation)
- Rashed, T., Dilekli, N., Hines, K., Brodie, A, and Tran-Vinh, T. 2007. GIS Strategy Plan for Oklahoma's Capital Improvement Planning Program (GeoCIP) (Technical Report Submitted to the Oklahoma Department of Commerce)

LANGAUGES

Fluent in Arabic and English.

PERSONAL

U.S. citizen.

