CURRICULUM VITAE

Name: Mahmoud SALAH

Affiliation: Department of Surveying Engineering,
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Present Position: Lecturer

Academic Qualifications & Awards:

- **2010: PhD.** Surveying engineering, Title: "Towards Automatic Feature Extraction from High Resolution Digital Imagery and Lidar Data for GIS Applications", Shoubra faculty of engineering, Benha University. Joint supervision from the School of Surveying and Spatial Information Systems, The University of New South Wales (UNSW), Sydney, Australia.
- **2004: M.Sc.** Surveying engineering, Title: "Updating Maps from High-Resolution Satellite Imagery as an Alternative to Traditional Techniques", Shoubra faculty of engineering, Benha University.
- **1999: B.Sc.** surveying engineering, Shoubra faculty of engineering, Benha University. **Graduation Grade:** Very Good.

Brief Biography:

- **2010-uptodate:** Lecturer, Department of Surveying, Shoubra faculty of engineering, Benha University.
- **2008-2010:** Visiting Research Fellow at the School of Surveying and Spatial Information Systems, The University of New South Wales (UNSW), Sydney, Australia, under supervision of Prof. John C. Trinder.
- **2004-2008:** Assistant Lecturer, Department of Surveying, Shoubra faculty of engineering, Benha University.
- **2000 -2004:** Demonstrator, Department of Surveying, Shoubra faculty of engineering, Benha University.

Knowledge of Languages:

- **Arabic:** native language.
- **English:** excellent speaking, reading and writing.

Computer/Communication Skills:

- **Development Tools:** Matlab, Basic, Pascal and FORTRAN.

- **Image Processing and GIS:** Erdas Imagine, ENVI, PCI Geomantic, IDRISI, Arc GIS, Cartalinx, PI3000, Photo Modeler, Terra Scan and XLR.
- **Drawings & Design:** Cad system, Soft-desk, Autodesk Land Desktop, Surfer.
- **Others:** ICDL (International Computer Driving License).

Teaching Experience:

Lecture the following Surveying practical courses at the Department of Surveying, Shoubra faculty of engineering, Benha University:

- Descriptive Geometry.
- Civil & Engineering Drawing.
- Classical Surveying (Geomatic Engineering), Terrestrial Surveying, Topographic Surveying, Mining Surveying
- Classical Geodesy, Mathematical Geodesy, Satellite Geodesy
- Roads & Railways Design
- Geographic Information Science (GIS).
- Geodetic & Field Astronomy
- Computer Applications.
- Specifications and Quantitative.
- Project Managements.
- Engineering Geology.
- Map Projection.
- Aerial Photogrammetry.
- Close Range Photogrammetry.
- Remote Sensing.

Professional & Scientific Duties:

- Participated as a speaker in a session entitled “Information Extraction " in workshop on “Lidar Data Acquisition and processing”, organized by The School of Surveying and Spatial Information Systems, University of New South Wales, Sydney, Australia which was held between 22 and 23 February 2010 (ISA NSW Inc **Event code: 08.92 PPA&PPB**).
- Participated as a student evaluator in the Swedish part of the TEMPUS European Community funded project, JEP-34081-2006, entitled “Integration of environmental aspects and modern technology and pedagogic (eLearning) in Egypt higher education with special focus on planning” with a duration from 2007-09-01 to 2009-08-31.
- April 15/24, 2008 Visiting Student to the Department of Physical Geography and Ecosystem analysis, LUND University, Lund, Sweden.
- April 15/24, 2008 Visiting Student to the school of Architecture and the Built Environment (ABE), Royal Institute of Technology (KTH), Stockholm, Sweden.

Consultancies:

- **2003-uptodate:** Consultant for Engineering Consulting and Studies Centre for Photogrammetry, remote sensing, GPS and GIS works.

- **2003-uptodate:** Consultant for Cairo Engineering and manufacturing company, (Cairo-Egypt), for Photogrammetry, remote sensing, GPS and GIS works.
- **2005:** a member in a surveying team to perform the surveying works of the new runway of the Cairo International airport.
- **2005:** a member in a surveying team to connect the high voltage networks between Sharm El-Sheikh and South of Sinai cities.
- **2006:** a leader of a working team for mapping 191 villages in banisuif city-Egypt, from 1m Ikonos imagery for urban planning purposes.

Research Student Supervision:

- Accuracy Assessment of 3D model generation using High Resolution Stereo-Optical Satellite Imagery (M.Sc.) 2012
- Assessment of Different height sources for orthorectification of Satellite Imagery (M.Sc.) 2012

Publications:

Journal:

- Doma, M., **Salah, M.** and Rehab, A. 2014. Sensitivity of Pixel-Based Classifiers to Training Sample Size in Case of High Resolution Satellite Imagery. *Engineering Research Journal, Faculty of Engineering Minoufiya University*, Volume 37, Issue 3, July 2014, pp. 5757-5783. ISSN1110-1180.
- EL Sagheer, A., Zaki, K., **Salah, M**. and Marrei, A., 2013. Rigorous versus Generalized Sensor Models: Assessment of Different Height Sources for Orthorectification of High Resolution Satellite Imagery. *Accepted for publication in Civil Engineering Research Magazine, Faculty of Engineering. Al-Azhar University*, Cairo, Egypt.
- **Salah, M.**, ELhadi, K., Amr, H., ELssemary, H., 2012. Accuracy Assessment of DEM generation using High Resolution Stereo-Optical Satellite Imagery. *ERJ*-Faculty of Engineering at Shoubra, Benha University, Cairo, Egypt. Volume 19, July 2013, pp. 67-82.
- **Salah, M.**, Trinder, J. & Shaker, A., 2011. Performance Evaluation of Classification Trees for Building Detection from Aerial Images and Lidar Data: A Comparison of Classification Trees Models. *International Journal of Remote Sensing.*Volume 32, Issue 20, pp. 5757-5783. DOI: 10.1080/01431161.2010.507678.
- Park, H., **Salah, M.** & Lim, S., 2010. Accuracy of 3d Models Derived from Aerial Laser Scanning and Aerial Ortho-Imagery. *Survey Review*, 43(320), pp.109-122.
- **Salah, M.**, Trinder, J. & Shaker, A., 2009. Evaluation of the Self-Organizing Map Classifier for Building Detection from Lidar Data and Multispectral Aerial Images. *Journal of Spatial Science*, Vol. (54), No. (2), December 2009.
- Shaker, A., Hamed, M., Elsagheer, A., & **Salah, M.**, 2007. Accuracy Assessment of Modern Classification Techniques for Automatic Feature Extraction from Very High Resolution Satellite Imagery. *Civil Engineering Research Magazine, Faculty of Engineering. Al-Azhar University*, Cairo, Egypt. Vol. (29) No. (3) October 2007, pp. 1075-1094.

- Zaky, K., Ghoneim, A., Shebl, S. & **Salah, M.**, 2006. Exploring New Procedure for Road Extraction from High Resolution Satellite Imagery. *Civil Engineering Research Magazine, Faculty of Engineering. Al- Azhar University*, Cairo, Egypt. Vol. (28) No. (3) October 2006, pp. 1104-1115.
- Shaker, A., Elsagheer, A., El-Shehabi, A. & **Salah, M.**, 2004. Accuracy investigation of the Orthorectification Strategies for High Resolution Satellite Images. *Civil Engineering Research Magazine, Faculty of Engineering. Al-Azhar University*, Cairo, Egypt. Vol. (26) No. (2) April 2004, pp. 918-934.
- Shaker, A., Elsagheer, A., El-Shehabi, A. & **Salah, M.**, 2004. Application of High-Resolution Satellite Imagery for Large Scale Maps Updating. *Engineering Research Journal, Shoubra Faculty of Engineering. Benha University*, Cairo, Egypt. Vol. (1) No. (1) June 2004, pp. 142-158.

Conferences:

- **Salah, M.**, 2014. Combining Pixel-Based and Object-Oriented Support Vector Machines using Bayesian Probability Theory. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, , II-7, 29 September – 2 October 2014, Istanbul, Turkey, p.67-74, doi:10.5194/isprsannals-II-7-67-2014.
- J.C.Trinder, **M. Salah**, 2012. Aerial Images and Lidar Data Fusion for Disaster Change Detection. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume I-4, 2012, XXII ISPRS Congress, 25 August – 01 September 2012, Melbourne, Australia, p. 227 to 232.
- J.C.Trinder, **M. Salah,** 2011**.** Disaster Change Detection Using Airborne Lidar. *Proceedings of the Spatial Sciences & Surveying Biennial Conference*, 2011, 21-25 November 2011, Wellington, New Zealand, p. 231 to 242.
- J.C.Trinder, **M. Salah**, 2011. Airborne Lidar as a Tool for Disaster Monitoring and Management. *GeoInformation for Disaster Management*, Antalya, Turkey, 3-8 April, paper OP09, http://www.isprs.org/proceedings/2011/Gi4DM/CDDATA/index.html.
- TRINDER, J.C., & **GOMAH, M.S.**, 2011. Optimization and validation of support vector machines for land cover classification from aerial images and LiDAR data. *34th Int. Symp. on Remote Sensing of Environment*, Sydney, Australia, 10-15 April, page 895, http://www.isprs.org/proceedings/2011/ISRSE-34/index.html.
- John Trinder, **Mahmoud Salah**, Ahmed Shaker, Mahmoud Hamed, Ali Elsagheer, 2010. Combining Statistical and Neural Classifiers Using Dempster-Shafer Theory of Evidence for Improved Building Detection. *Proceedings 15th Australasian Remote Sensing and Photogrammetry Conference*, Alice Springs, 13-16 September 2010, pp1134-1143.
- **Salah, M.**, Trinder, J., Shaker, A., Hamed, M. and Elsagheer, A., 2010. Integrating Multiple Classifiers With Fuzzy Majority Voting for Improved Land Cover Classification, *ISPRS International Archive of Photogrammetry, Remote Sensing & GIS*, Volume 39 (3) Part A, pp7-12.
- **Salah, M.** and Trinder, J., 2009. Support Vector Machines Based Filtering of Lidar Data: A Grid Based Method. In *the XXIV Fig International Congress 2010*, 11-16 April

2010, Sydney, Australia [Online]. Available From https://www.fig.net/pub/fig2010/papers/ts07d/ts07d_gomah_trinder_4063.pdf.

- **Salah, M.** and Trinder, J., 2009. Fuzzy ARTMAP Neural Networks for Automatic Feature Extraction from Aerial Images and Lidar Data. In Lees, B.G. & Laffan, S.W. (Eds), *10th International Conference on Geocomputation*, UNSW, Sydney, 30 November-2 December, 2009, pp. 224 – 232.
- **Salah, M.**, Trinder, J., Shaker, A., Hamed, M. and Elsagheer, A., 2009. Aerial Images and Lidar Data Fusion for Automatic Feature Extraction Using the Self-Organizing Map (SOM) Classifier. In: Bretar F, Pierrot-Deseilligny M, Vosselman G (Eds), *Laser Scanning 2009, IAPRS, Vol. Xxxviii, Part 3/W8* – Paris, France, September 1-2, 2009, pp. 317 – 322.