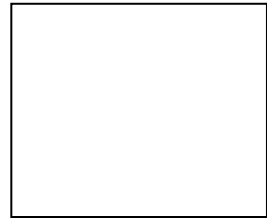


CURRICULUM VITAE



* Personal Identification :

Name : Ashraf El-Kutb Mousa Sharaf.
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Address : 9/1 Mecca St., Saudi Housings, New Maadi,
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*Academic Qualifications :

- 1- Doctor of Science Degree in “Geodetic Science”; (24th March, 1997), Faculty of Science, *Kyoto University, Kyoto, Japan.*

Title of the thesis “ Characteristics of Wet Tropospheric Delay Deduced from Water Vapor Radiometer Data and Their Implications for GPS baseline Solution Accuracy”

- 2- Master Degree in “Surveying and Geodetic Science” ; (1st March, 1992), Faculty of Engineering, *Ain Shams University, Cairo, Egypt.*

Title of the thesis “ Design of Geodetic Networks for Monitoring Recent Crustal Movements using the Optimization Theory”

- 3- B. Sc. Civil Engineering, (June, 1987), Public Work Dept., Faculty of Engineering, *Ain Shams University, Cairo, Egypt.*

General Grade : “ Distinction “

Project : “Surveying” ; Project Grade : “ Distinction “

*** Employment records:**

a- EGYPTIAN STAY

- 1- Prof., National Research Institute of Astronomy and Geophysics, Helwan, Cairo, Egypt.
[February 20th , 2014 Till Now].**
- 2- Associate Prof., National Research Institute of Astronomy and Geophysics, Helwan, Cairo, Egypt.
[September 27th , 2003 Till 20 Feb, 2014].**
- 3- Lecturer, National Research Institute of Astronomy and Geophysics, Helwan, Cairo, Egypt.
[October 1st, 1997 Till September 27th, 2003].**
- 4- Lecturer Assistant, National Research Institute of Astronomy and Geophysics, Helwan, Cairo, Egypt.
[May 19th, 1992 Till October 1st, 1997].**
- 5- Instructor, National Research Institute of Astronomy and Geophysics, Helwan, Cairo, Egypt.
[March 1st, 1989 Till May 18th, 1992].**
- 6- Land Surveyor while Military Service.**

b- Abroad

- 7- Associate Prof., Geodesy and surveying, faculty of maritime studies, King AbdulAziz University, Jeddah, KSA, Jan., 2010 till June 2012.**
- 8- GPS and Geodesy Expert and consultant, Jeddah Municipality , Jeddah, KSA, March 2007 till August 2009.**
- 9- Visiting Associate Prof., Faculty of Engineering AL Minia University. 2004-2007.**
- 10- Three months (post Doctoral award from Japanese JASSO) visit to the Radio Science Center for Space and Atmosphere, Kyoto University, Japan, October-december, 2004.**
- 11- Two year (Post Doctoral Award from the Japanese JSPS), Radio Science Center for Space and Atmosphere, Kyoto University, Japan, 2001-2003.**
- 12- Three months (Post Doctoral Award from the Japanese WAJ) visit to the Radio Science Center for Space and Atmosphere, Kyoto University, Japan, 2000.**

13- Four months (Post Doctoral Award from the Japanese CEO) visit to the Radio Science Center for Space and Atmosphere, Kyoto University, Japan, 1999-2000.

[December 1st, 2000 till March 28th, 2001].

***Teaching experience:**

The following courses have been taught by my self during my career:

- 1- Plan surveying.**
- 2- Introduction to GPS.**
- 3- GPS surveying and applications.**
- 4- Advanced Geodesy.**
- 5- Hydrographic Surveying**
- 6- Supervisor of The surveying graduation project, Surveying section, Civil Engineering department , AlMinia University.**
- 7- Estimation and Data management.**

The following lectures and siminares were given During Woking as a consultant at at Jeddah Municipality:

- 1- Introduction to GPS**
- 2- Introduction to CORS/ VRS system**
- 3- Map projection and scale factor**
- 4- Introduction to Geodesy**
- 5- Coordinate systems**

Thesis Supervised during my career:

- 1- Share in supervision of the Ph.D. thesis by Eng: Reham Nagiub, “PPP for atmospheric research”.**
- 2- Share in supervision of the Ph.D. thesis by Eng: Ibrahim Fouad, “GNSS radio occultation for Tropospheric delay estimation”.**
- 3- Share in supervision of the Ph.D. thesis by Eng: Hala Eldasouky, “Statistical validation of GNSS radio occultation Temperature and vapor”.**
- 4- Share in supervision of the Ph.D. thesis by Eng: Mohammed Zhran, “height of Tropopause using GPS radio Occultation ”.**
- 5- Share in supervision of the Ph.D. thesis by Eng: Ragab Elhady, “estimation of PWV using GNSS and numerical Weather Prediction”.**
- 6- Share in supervision of the Ph.D. thesis by Eng: Ahmed Nabil, “Deformation using INSAR”.**
- 7- Share in supervision of the Ph.D. thesis by Eng: Ahmed Saadon, “Ground water using Grass and Grass follow on satellites”**
- 8- Share in supervision of the Ph.D. thesis by Eng: Ahmed Sherif, “GNSS radio occultation for Ionospheric research In Egypt”.**
- 9- Share in supervision of the Ph.D. thesis by Eng: Mohamed Abd, “GNSS code biases analysis.**
- 10- Share in supervision of the Ph.D. thesis by Eng: Nesreen Elhaty, “GPS for precipitable water vapour estimation”.**

- 11- Share in supervision of the Ph.D. thesis by Eng: Mohammed Amin, "Precise Tropospheric delay Model for Egypt".
- 12- Share in supervision of the M.Sc. thesis by Eng: Mohammed Drrag, "using GNSS For water vapor estimation in Egypt".
- 13- Share in supervision of the M.Sc. thesis by Eng. Ahmed Nabil, "Precise Tropospheric mapping function Model for Egypt".
- 14- Share in supervision of the M.Sc. thesis by Eng. Ragab Elhady. "Evaluation of GNSS system combinations".
- 15- Share in supervision of the Ph.D. thesis by Eng: Asmaa Ragab, "PWV using GPS and WRF model".
- 16- Share in supervision of the M.Sc. thesis by Eng: Ibrahem Fouad, "GNSS Occultation simulation in Egypt".
- 17- Share in supervision of the M.Sc. thesis by Eng. Reham Naguib, "GPS phase center variation Error".
- 18- Share in supervision of the M.Sc. thesis by Eng: Mohammed Amin, "Assesment of Tropospheric delay Models".
- 19- Share in supervision of the M.Sc. Thesis by Eng: Mahmoud Salem, "Parametric investigations for GPS accuracy".
- 20- Share in Supervision of Ph.D. by Dr. Ahmed Munir Hamdy, "GPS Crustal movement Application in Sinai Area.
- 21- Share in Supervision of Ph.D. by Mr. Ramadan Munir, "Earth tides investigations in Aswan area".
- 22- Share in Supervision of M.Sc. by Mr. Ali Radwan, " Regional Crsatal deformation using GPS data in upper Egypt".

Lecture Notes:

Authering the training course " Survey Engineers summer training" in Arabic, Jeddah municipality, 2008

Author of the following internal lecture notes titeled

- 1- "New Approaches in Studying Temporal and Spatial Variation of the Zenith Tropospheric and Ionospheric Delay", 2014
- 2- "Introduction to Geometric Geodesy", 2005.
- 3- " GPS instrumentation and applications", 2003.
- 4- "Seismic Survey and QC", 2007.
- 5- Introduction to Hydrographic surveying.

Authering two Arabic technical guides

- 1- Jeddah Municipality CORS/ VRS Guide.
- 2- Jeddah Municipality coordinate system.

***Computer Skill :**

- Mcrosoft software family.
- Golden software family

- Adobe software family
- Unix operating system.
- Shell programming (Professional programmer).
- Fortran programming (Professional programmer).
- All commercial GPS software.
- Most of commercial Surveying software.
- Bernese GPS software (all versions, including bpe).
- GMT mapping software.

***Scientific Activity :**

Training Courses

- Attend Bernese 4.0 GPS Software training course, Astronomical Institute, Bern University, February, 1998.
- Attend GIPSY GPS software training course, Raytheon, JPL, NASA, April, 2001.
- Attend “Trimble CORS setup and supervision” for one week , Jeddah, August 2007
- Attend “Train the Trainers course” for one week, Jeddah, June, 2008

***Local Scientific meetings:**

- 1- Attend the International symposium of the Regional Crustal Movement studies in Africa, Aswan, 1990.
- 2- Attend the International Meeting of the Egyptian Geophysical Society, Cairo, 1998.

***International Scientific Meetings :**

- 1- Attend the International symposium of the recent Crustal Movement studies, Kobe, Japan, 1993.
- 2- Attend the International meeting of the American Geophysical Union, San Francisco, 1994
- 3- Attend the International symposium of the recent Crustal Movement studies, Cairo, Egypt, 1997.
- 4- Attend the international meeting of IUGG, Birmingham, UK, 1999.
- 5- Attend the international symposium, GPS99, Tsukuba, Japan, 1999.
- 6- Attend the international meeting of the ION, GPS2001, Salt lake, USA, 2001.
- 7- Attend the 1st international meeting of the Occultation for probing atmosphere and climate (OPAC-1), Graz, 2002.
- 8- Attend the international meeting of IUGG, Sapporo, Japan, 2003.
- 9- Attend the Nato ARW “ Regional climate variability and its impacts in the mediterranean area” Marrakech, 23-27 November, 2006

International Scientific Mission:

- 1- Three week visit to the International Center on Recent Crustal Movements, Check republic, 1992.

- 2- Three days visit to NASA, JPL, Pasadena, USA, 2001.
- 3- Three days VISIT to UNAVCO (UCAR, Colorado University, USA, 2001.
- 4- Two weeks visit to EOST, Strasbourg university, Strasbourg, France, 2014.
- 5- Two weeks visit to GFZ, Potsdam, Germany, 2016
- 6- One week visit to GFZ, Potsdam, Germany, 2018
- 7- Two weeks visit to GFZ, Potsdam, Germany, 2021.

***Scientific Research Projects:**

- 1- Share in the Project of archeology and heirtage documentations for Sakkara Area.
- 2- Share in the Project of archeology and heirtage documentations for Lahon Area.
- 3- Share in the Project of archeology and heirtage documentations for Fialla and Abou simble temple.
- 4- Share in the Project of safety of the high dam spill way chanel bridge.
- 5- Share in the Project of archeology and heirtage documentations for Old Islamic area.
- 6- Share in the project of Teaching improvement at Minia Univircity through solving Prototype real life Problems
- 7- Share in the Project of studying recent crustal movement south of Aswan and around the northern part of the High Dam Lake.
- 8- Share in the research Project for the study of the collapse in some limestone caves (Wadi Houf).
- 9- Share in the research Project for determining the secure routes for heavy trucks in Wadi Houf area.

*** Work before Ph.D.:**

- a. Computer System Administrator at the Geodesy Lab.
- b. Planning and designing of local, sub-regional and regional geodetic network for the crustal deformation studies purposes.
- c. Observing and analysing of horizontal and vertical geodetic networks that are specified for crustal movements studies.
- d. Monitoring recent crustal movements and earthquake activity around active faults using geodetic analysis.
- e. Stability and deformation study of the big structure like High Dam, Wadi-hof caves using geodetic analysis.
- f. Geophysical prospecting (gravity method) about underground natural cavities for determining the cause of the cave collapse.
- g. Precise leveling of the road around the high dam up to Sudan Boarder.

*** Work after Ph.D.:**

- a. High precision analysis of GPS data for crustal movement studies,
- b. Studying the effect of the tropospheric delays on the solution of GPS over long baselines and developing models that improve the accuracy of the solution,
- c. Studying and analysing the use of GPS as a meteorological source of data,

- d. Geophysical prospecting (gravity method) about underground natural cavities in Wadi Hof area for determining the secure routes for Heavy trucks.
- e. Preparation and giving the lecture for the training course of the Suez Canal Engineers, held at the National research institute of Astronomy and Geophysics.

8- Languages:

- 1- Arabic.
- 2- English.
- 3- Japanese (fair).

LIST OF RESEARCH PAPERS

A- Before Ph. D.

- 1- *Ashraf Mousa* and Torao Tanaka, (1996a), “ An Evaluation of Mapping Functions Using Water Vapor Radiometer.” Japan Earth and Planetary Science Joint Meeting, Osaka, March, 1996.
- 2- *Ashraf Mousa* and Torao Tanaka, (1996b), “A Local Mapping Function and improvement of the GPS Solution Accuracy.” 86th Meeting of Geodetic Society of Japan, October, 1996, Kuchi Shi, Shikukyo, Japan.
- 3- *Ashraf Mousa* and Torao Tanaka, (1996c), “ A Comprehensive Analysis of Wet Delay Mapping Functions Based on Water Vapor Radiometer Observations at South-West Japan.” Annuals, Disas. Prev. Res. Inst., Kyoto Univ., No. 39 B-1, 1996.
- 4- Tanaka,T., T. Nakano, K. Hirahara and *Ashraf Mousa*, (1996), “ GPS Observations for Crustal Movements and Meteorology.” Recent Crustal Movements in Europe, Hungary, 1-5 Sept., 1996, Proceedings of the IAG Regional Symposium, to be appear in the Journal of Geodynamics.
- 5- Nassar, M. M., A. A. Tealeb, *Ashraf Mousa*, (1995a), “Application of the Third Order Design Problem on Existing Geodetic Networks Established for Monitoring Recent Crustal Movements” Bull. Of the National Research Institute of Astronomy and Geophysics, Vol. XI, pp. 57-78.
- 6- Nassar, M. M., A. A. Tealeb, *Ashraf Mousa*, (1995b), “Measures of Quality for Crustal Movements Monitoring Networks” Bull. Of the National Research Institute of Astronomy and Geophysics, Vol. XI, pp. 79-103.
- 7- Nassar, M. M., A. A. Tealeb, *Ashraf Mousa*, (1995c), “The Datum Problem of Crustal Movement Monitoring Networks” Bull. Of the National Research Institute of Astronomy and Geophysics, Vol. XI, pp. 179-198.
- 8- *Ashraf Mousa* and Torao Tanaka, (1995), “A Modified Chao Mapping Function for Southwest Japan Based on Water Vapor Radiometer Observations.” XXI General Assembly of IUGG, July 2-14, 1995, Colorado, USA.
- 9- *Ashraf Mousa* and Torao Tanaka , (1994), “ Evaluation of Mapping Functions Based on a Preliminary Analysis of Water Vapor Radiometer Observations at Shionomisaki, Southwest Japan ” , EOS Vol. 75, No. 44, Nov. 1, 1994, Supplement for AGU , Dec. 5-9, 1994 fall meeting, San Francisco, CA , USA, G32A-6, pp. 173-174.
- 10- Torao Tanaka, *Ashraf Mousa*, Masahiko Ohba and Kazuro Hirahara, (1994) “Characteristics of Water Vapor Distribution in the atmosphere and GPS Positioning in Southwest Japan. “ Proceeding of the Fourth International Symposium of Crustal Movement in Africa (RCMA, 94), Kenya, 28 Nov. - 2 Dec. 1994, pp. 99-112.

B- After PH.D

1. A. Yassen, Ashraf Mousa, M. Rabah, a. Saber, M. Zahran (2022)
 “Analysis of spatial and temporal variation of precipitable water vapor using COSMIC radio occultation observations over Egypt” *The Egyptian Journal of remote sensing*, vol25, pp. 751-764.
2. M. A. Abdelfatah, N. M. Elhaty, A. E. Mousa & G. S. El-Fiky (2022)
 Derived precipitable water vapour from GNSS and radiosonde data using time series and spatial least-square, *NRIAG Journal of Astronomy and Geophysics*, vol. 11, No 1, pp. 113-119.
3. M. Zahran, Ashraf Mousa (2022), the “Planetary boundary layer height retrieval using GNSS Radio Occultation over Egypt” *The Egyptian Journal of remote sensing*, vol25, pp. 501-559.
4. A. S Mohamed, G. H. Hassib, N. AbouAly & A. El-Kutb (2022)
 Evaluation of recent crustal deformation and seismicity in spillway fault area, Aswan, Egypt, *NRIAG Journal of Astronomy and Geophysics*, 11:1, 325-336
5. Ibrahim Fouad, Ashraf Mousa, G. Elfiky (2021) “Comparison Between GPS Radio Occultation and Radiosonde Atmosphere Profiles in Egypt, *Egyptian Journal of remote sensing*, vol. 25, pp. 491-500.
6. Rasha Mosad, *Ashraf El-kutb*, Ahmed El-Hattab, Mostafa Rabah and, Ashraf El-Koshy (2021), “Using PPP-GNSS Technique for Detecting Surface Motion due to Earthquake Shaking based on time-domain analysis.” *PSERJ*, Vol 25, No. 1.
7. Rasha Mosad, *Ashraf El-kutb*, Ahmed El-Hattab, Mostafa Rabah and, Ashraf El-Koshy (2021), “Detection of Seismic Movements using GNSS data.” *PSERJ*, Vol 24, No. 2
8. Ibrahim Fouad, *Ashraf Mousa*, G. Elfiky (2020) “GNSS-RO LEO Satellite Orbit Optimization for Egypt and the Middle East Region” *Alexandria Engineering Journal*.
9. Alshimaa Y. Abo Gharbia, Mohamed Amin, *Ashraf E. Mousa*, Nadia AbouAly, Ghada M. El Banby & Fathi E. Abd El-Samie, (2020) Registration-based change detection for SAR images, *NRIAG Journal of Astronomy and Geophysics*, Volume 9, 2020 - Issue 1, pp 443-450
10. N. Elhaty, M. Amin, *Ashraf Mousa* and G. Elfiky (2019) “GNSS Meteorology in Egypt: Modeling Weighted Mean Temperature from Radiosonde data” *Alexandria Engineering Journal*.
11. Asmaa Ragab, *Ashraf Mousa*, Zaiban Mohamed, and M. Abdelwahab (2019) “Comparison of Precipitable Water Vapor from GPS and WRF model: A Case Study for Two different Egyptian Sites” *International Journal of Scientific & Engineering Research* Volume 10, Issue 9.

12. Ragab Elhady, M. Amin, *Ashraf Mousa* and G. Elfiky (2019) "Performance Analysis of the Permanent and a Regional GNSS Networks in Egypt" *Current Science International*, Volume : 08 | Issue : 02.
13. Zahran M., *A. Mousa* , M. Rabah and M. Zaki, (2018) "Utility of GNSS Radio Occultation technique for tropopause height investigation over Egypt" *NRIAG JOURNAL OF ASTRONOMY AND GEOPHYSICS*
14. Nesreen M. Elhaty, Mohamed A. Abdelfatah, *Ashraf E. Mousa*, and Gamal S. El-Fiky (2018) " GNSS Meteorology in Egypt: Modeling Weighted Mean Temperature from Radiosonde data" Paper Presented at ACAG6.
15. A. Nabil, M. A. Abdelfatah, *Ashraf E. Mousa*, and Gamal S. El-Fiky (2018b) "A New Model for Reduction of Azimuth Asymmetry Biases of Tropospheric Delay" *NRIAG JOURNAL OF ASTRONOMY AND GEOPHYSICS*
16. A. Nabil, M. A. Abdelfatah, *Ashraf E. Mousa*, and Gamal S. El-Fiky (2018a) "Regional Egypt Tropospheric Mapping Function Model" *Alexandria Engineering Journal*.
17. . M. A. Abdelfatah, *Ashraf E. Mousa*, and Gamal S. El-Fiky (2018) "Assessment of tropospheric delay mapping function models in Egypt: Using PTD database model" *NRIAG Journal of Geophysics*.
18. Ibrahim Ghoniem, *Ashraf El-Kutb Mousa*, Gamal El-Fiky (2017) "Distribution of the GNSS-LEO occultation events over Egypt" *NRIAG Journal of Geophysics*, 6.
19. Mohammed A. Abid, *Ashraf Mousa*, Mostafa Rabah, Mahmoud El mewafi, and Ahmed Awad. (2016) " Effect of Differential Code Biases on the GPS CORS Network: A Case Study of Egyptian Permanent GPS Network (EPGN)" *Computer Engineering and Intelligent systems*, 7-8
20. Mohammed A. Abid, *Ashraf Mousa* , M. Rabah , M. El mewafi , A. Awad (2016) "Temporal and spatial variation of differential code biases: A case study of regional network in Egypt" *Alexandria Engineering Journal*, 55.
21. Banyai L , Abdel-Monem S. M., Eszter Szűcs, Abou-Aly N., *Ashraf Mousa*, and Khalil H (2016) " The relationship between global plate motion and intra-plate deformation analysis of Cairo network: case study with Simulated Data". *Arabian Journal of Geosceince*, 9.
22. *Ashraf Mousa*, N. Abou Aly, M. Sharaf, H. Zahrah and M. Darag (2016) "Tropospheric Wet Delay Estimation Using GNSS: Case Study of a Permanent Network in Egypt" *NRIAG Journal of Geophysics*, 5.

23. **M. A. Abdelfatah, Ashraf E. Mousa, and Gamal S. El-Fiky (2015) " Precise Troposphere Delay Model for Egypt, as Derived from Radiosonde Data" NRIAG Journal of Geophysics, 4.**
24. **Ashraf Mousa, N. Abou Aly and M. Saleh (2014) "Assessment of Precise Point Positioning Using EGYNET: an Egyptian CORS Network for Geophysical Application" paper presented at ACAG4 international Conference.**
25. **Ashraf Mousa , A. Alhatab and S. Almadani (2013) "Jeddah CORS/VRS: Design, Establishment, and testing", Port Said Engineering Research Journal , Faculty of Engineering, Port Said University, Vol. 2, No. 7.**
26. **A. Alhatab and Ashraf Mousa (2013) " Towards a Real Time Leveling Using the VRS GPS Network in Jeddah ", NRIAG Journal of Geophysics, Vol.2 , 243-249pp.**
27. **Ashraf Mousa, T. Tsuda (2012), "Abel inversion for deriving refractivity profile from down-looking GPS radio occultation: simulation analysis", AJG, 5:781–787 Springer, Germany.**
28. **Ashraf Mousa, T. Tsuda (2007), "ANALYSIS OF DOWN LOOKING GPS OCCULTATION SIMULATED DATA USING LEAST SQUARES AND ABEL INVERSIONS " NATO Science series, Vol. 79 , Springer, USA.**
29. **Ashraf Mousa, Y.Aoyama and T.Tsuda (2006), "Simulation analysis for optimizing equatorial radio occultation mission satellite orbit " EPS, Vol 58, No., Japan.**
30. **Gamal S. El-Fiky and Ashraf E. Mousa (2004), "TESTING OF GLOBAL ZENITH HYDROSTATIC DELAY MODELS OF GPS MEASUREMENTS FOR THE EGYPTIAN CLIMATE" Journal of Faculty of Eng., Vol. 39, No. 4, Ain Shams University.**
31. **Ashraf E. Mousa and Gamal S. El-Fiky (2004), "Present – Day Crustal Deformation in the Eastern Mediterranean and Middle East as Derived from GPS Observations" Journal of Faculty of Eng., Vol. 39, No. 4, Ain Shams University.**
32. **Ashraf Mousa and T. Tsuda (2004), "Inversion Algorithm for GPS Down Looking Occultation Data: Simulation Analysis." Journal of Meteorological Society of Japan, Vol. 82, No. 1B, Tokyo, Japan.**
33. **Ashraf Mousa, Y. Shoji, Y. Aoyama, H. Nakamura and T. Tsuda (2004), " Refractivity Profiles Obtained by Abel Inversion from A Down Looking GPS Radio Occultation Experiment at Mt. Fuji: Preliminary Results and Future Plan." OPAC1 meeting, Graz, Austria, In press.**

34. Y. Aoyama, Y. Shoji , *Ashraf Mousa*, T. Tsuda and H. Nakamura (2004), "A GPS Down Looking Occultation Experiment On the Top of Mt. Fuji: Preliminary Results ." *Journal of Meteorological Society of Japan*, Vol. 82, No. 1B, Tokyo, Japan
35. *Ashraf Mousa*, Gamal El-Fiky, Mostafa Rabah and Ahmed El-Hattab (2003), "A Proposed Local Dry Zenith Delay Model for GPS Measurements in Egypt, derived from Surface Pressure Data." *PSERJ*, Vol. 7, No. 1, Faculty of Engineering Suez Canal University, Port Said, Egypt.
36. Mostapha Rabah, Gamal S. El-Fiky, *Ashraf Mousa*, and Ali Tealib (2002), "Developing a Real-Time Approach for Detecting and Repairing Cycle Slips in Difference Mode Based upon Ionospheric Residuals and Extra Wide-Laning Technique Combination" *Journal of Geophysics*, Vol. 1, No. 1, National Research Institute of Astronomy and Geophysics, Helwan, Egypt.
37. Gamal S. El-fiky, *Ashraf Mousa*, and Ali Tealib (2002), " Temporal Change of Vertical Deformation around the Kalabsha Fault, Northwest of Nasser Lake, Deduced from Dynamic Adjustments of Leveling Data" *Journal of Faculty of Eng.*, Vol. 37, No. 3, Ain Shams University.
38. Gamal S. El-fiky, *Ashraf Mousa*, Mostafa Rabah, Hassan Khalil, and Ali Tealib (2002), " The Elastic Stress Field around Northern Part of the Nasser Lake, Derived from GPS Measurements and its Tectonic Implications" *Journal of Faculty of Eng.*, Vol. 37, No. 3, Ain Shams University.
39. Gamal S. El-Fiky, Mostapha Rabah, *Ashraf Mousa*, Khalid Zahran, Ali Raiyan and Ali Tealib (2002), "Present-day Crustal Deformation in and around the Cairo City, Egypt, as derived from GPS Measurements and its Tectonic Implications " *Journal of Geophysics*, Vol. 1, No. 1, National Research Institute of Astronomy and Geophysics, Helwan, Egypt.
40. *Ashraf Mousa*, Gamal S. El-Fiky, Mostapha Rabah, Ahmed Munir and Ali Tealib (2002) "Effect of Tropospheric delay estimation on GPS baseline accuracy: An application to a network along the Gulf of Suez, Egypt" *Journal of Geophysics*, Vol. 1, No. 1, National Research Institute of Astronomy and Geophysics, Helwan, Egypt.
41. *Ashraf Mousa* (2002), "On the Zenith Hydrostatic Delay for GPS Measurements in Egypt: Assessments of Available Prediction Models" *Journal of Faculty of Eng.*, Vol. 41, No. 3, Alex University, Alexandria.
42. Gamal S. El-Fiky, *Ashraf Mousa*, H. G. El-Gazouly, and Mostapha Rabah (2001), "Present day Crustal Deformation derived from continuous GPS array: A study case of Japan", *Journal of Faculty of Eng.*, V. 41, 1, 105-119, Alex University.

43. *Ashraf Mousa* and Toshitaka Tsuda (2001), “ Retrieval of Key Climate Variable Using Ocultation Geometry of a Mountain Top GPS Receiver” ION GPS 2001 Proceedings, Salt Lake, USA.
44. Torao Tanaka, Y. Hoso, M. Harada, T. Hayashi, and *Ashraf Mousa* (2001), “GPS Error due to Non-uniform Distribution of Water Vapor”, tenth International Symposium on Recent Crustal Movements, August,27-31, 2001, Helsinki, Finland
45. *Ashraf Mousa* and Toshitaka Tsuda (2000), “Least Squares Inversion For Retrieval of GPS Occultation Data “ Proceedings of the ISAS Meeting, 2-3 March, 2000, Tokyo, Japan.
46. *Ashraf Mousa*, (1999a), " Effect of Using GPS as a Meteorological Sensor on the Baseline Precision" GPS99, Oct., 18 - 22, 1999, Tsukuba, Japan.
47. *Ashraf Mousa*, (1999b), “ Use of GPS for Sensing the Precipitable Water in Egypt : A Proposal” IUGG99,Juli.,19 - 30, 1999 Bermingham, England.
48. *Ashraf Mousa* and Torao Tanaka, (1998a), “ Characteristics of Tropospheric Wet Delay Deduced from Water Vapor Radiometer Data Taken at South West Japan” Ninth International Symposium on Recent Crustal Movements, November 14-19, 1998, Cairo, Egypt.
49. *Ashraf Mousa* and Torao Tanaka, (1998b), “Improving GPS Baseline Solution Accuracy Using A Local Tropospheric Delay Mapping Function” Ninth International Symposium on Recent Crustal Movements, November 14-19, 1998, Cairo, Egypt.
50. Torao Tanaka, Nakano T., Hose Y., Hirahara K., *Ashraf Mousa*, Hayashi T., Suemine A., and Yabe S. (1997), “Comparison of Crustal Deformation Observed with GPS and strainmeters/tiltmeters”, IAG97, September 3-9,1997 Rio De Janeiro, Brazil.
51. *Ashraf Mousa* and Torao Tanaka, (1997), “ Tropospheric Wet Delay of Microwaves at Shionomisaki, Southwest Japan, and a Preliminary Evaluation of Mapping Functions.” Journal of Geodetic Society of Japan, Vol. 43, No. 3 (1997), pp. 145-158.