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Associate Professor of Earth System Science and Remote Sensing
School of Earth and Environmental Sciences
Schmid College of Science and Technology, Chapman University, USA

and

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OBJECTIVE To extend my educational capabilities and to work on challenging research through a growth oriented position in scientific computing, remote sensing, physics of the atmosphere, meteorology, earth system sciences, land use / land cover, natural Hazards and geographic information system.

EDUCATION

Ph.D. in Computational Science & Informatics	September 2000 – May 2004 George Mason University, VA, USA Major: Environmental Physics/Remote Sensing Dissertation: “Regional Monitoring of Environmental Physics Climate Related Anomalies” Honors: Dissertation passed “with Distinction” GPA: 4.0
M.Sc. in Earth System Science	September 2002 – May 2004 George Mason University, VA, USA Major: Earth Sciences/Remote Sensing/GIS Honors: Dissertation passed “with Distinction” GPA: 4.0
M.Sc. in Computational Science	September 2001 – May 2003 George Mason University, VA, USA Major: Computational Sciences/Remote Sensing Honors: Degree passed “with Distinction” GPA: 4.0
Post Graduate Studies in Geophysics	January 1998 – January 2000 Alexandria University, Egypt Major: Geophysics Honors: Degree passed “with Distinction” GPA: 3.8
B.Sc. of Science	September 1994 – May 1997 Alexandria University, Egypt Major: Geophysics/Physics/Geology Honors: Degree passed “with Distinction” GPA: 3.99

WORK EXPERIENCE

Chapman University, USA	Associate Professor of Earth System Science and Remote Sensing <u>April 2011 - Present</u> <ul style="list-style-type: none">• Program Director of the master degree in Hazards, Global and
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	<p>Environmental Change (HGEC)</p> <ul style="list-style-type: none"> • Program Director of the master degree in Computational Science (CS) • Member of the curriculum committee of the Environmental Science and Policy Degree. • Member of the curriculum committee of Schmid College of Science and Technology. • Member of the faculty senate representing Schmid College of Science and Technology. (2010-2012) • Member of the Faculty Personnel Committee (FPC) • Member of the Dean’s Advisory Committee • Teaching introductory and graduate level courses in Hazards, Global Environmental change and Remote Sensing
<p>Chapman University, USA</p>	<p>Assistant Professor of Earth System Science and Remote Sensing <u>August 2008 – March 2011.</u></p> <ul style="list-style-type: none"> • Program Director of the master degree in Hazards, global and Environmental Change (HGEC) • Member of the local organizing committee of the Workshop on “Electromagnetic Signals Associated with Earthquakes and Volcanoes” (EMSEV) October 3-6, 2010 Chapman University, Orange, CA, USA • Member of the curriculum committee of the Environmental Science and Policy Degree. • Member of the Dean’s Advisory committee • Developed two master’s degrees in Hazards, Global and environmental Change and Computational Science. • Currently developing a Ph.D degree in Computational Science. • Studying air pollution problem over Egypt, Middle East and Mediterranean Region and Africa using satellite technology. • Analyzing aerosols and meteorology related parameters over South Korea. • Analyzing Glaciers retreat over the Himalayas. • Member, local organizing committee of the Earthquakes and climate change. • Teaching an introductory course in Hazards, Global Environmental change and Remote Sensing
<p>National Authority of Remote Sensing and Space Science (NARSS), Cairo, Egypt</p>	<p>Part time consultant – “Modeling lab using the remote sensing technology” <u>December 2005 - Present</u></p> <ul style="list-style-type: none"> • Succeeded in obtaining a joint research grant between Chapman University and NARSS funded through the NSF for US partner and Science & Technology for Development Fund (STDF) for Egypt partner. • Member of the sensors group for research and development for different areas of interest for Egypt development. • Participated in developing a dust module to be associated with global weather models for simulating dust events. • Lead the efforts for studying air pollution problem over Cairo using satellite technology • Contributed in analyzing assimilated temperature data

	<p>Geophysics Departments” 1997 – 2000</p> <ul style="list-style-type: none"> • Teaching Topics: Properties of Matter, Optics, Thermodynamics, Seismology, Magnetism, Electricity, Geohydrology, Gravity, Heat flow, Paleomagnetism, Geomagnetism, Applied Geophysics Labs and others. • Collaborated on curriculum and exam development, met with under graduate and postgraduate students upon request, and graded all written work, including final exam.
	<p>c) Computer instructor – “Alexandria University” 1996 – 1997</p> <ul style="list-style-type: none"> • Teaching Topics: Microsoft Office, Operating Systems, Networks and WWW. • Worked in computer centers and taught for graduate students in computer centers of Faculties of Science, Commerce, Agriculture, Law and Fine Arts.
<p>George Mason University, Fairfax, VA, USA</p>	<p>a) Research Scientist – “Center for Earth Observing and Space Research” May 2004 – May 2008</p> <ul style="list-style-type: none"> • Co-I in NASA funded project dealing with Air pollution over Mega Cities funded through the congress 2006. • Teaching a graduate level course summer 2006, titled “Introduction to Natural Hazards and Remote Sensing” • Teaching a training course summer 2006, titled “Introduction to Earth Observing, Climate change and Disasters” to the Chinese delegates of the Heilongjiang Bureau of Surveying and Mapping (HLJBSM), China • Succeeded in leading the research team to submit a joint proposal between Alexandria University and George Mason University for the National Science Foundation (NSF) that got funded 60,000 USD for three years starting 2006. • Currently involved in a research grant funded by NASA for studying the impact of pollution over megacities and I am representing Cairo case study in this project that got funded for two years starting 2007. • Currently involved in the committee of a PhD student in the George Washington University. • Participated as Co-PI and Co-I in Proposals funded by NASA and WMO. • Co-P.I. The Global Climate and Regional Impacts project, NASA Funded. • Developed overall structure for dual degrees programs.
	<p>b) Research Assistant – “Center for Earth Observing and Space Research.” 2001 – April 2004</p> <ul style="list-style-type: none"> • Participated in many research areas including ENSO detection, Dust Storms monitoring, Flash Floods, Global Climate Change and others. • Worked as Webmaster for the Center for Earth Observing and Space Research. http://ceosr.gmu.edu

C) Teaching Assistant – “School of Computational Sciences, Physics Department” **2001**

- Teaching Topics: Properties of Matter, Physical optics, Heat and Astronomy.
- Collaborated on curriculum and exam development, met with students upon request, and graded all written work.

PUBLICATIONS (IN CHRONOLOGICAL ORDER) *(student co-authors are italicized and underlined)*

Per reviewed Journals

1. **El-Askary H.**, *Hamdy S.*, Hattab M., and El-Raey M., “Change Detection of Coral Reef Habitat Using Landsat-5 TM and Landsat-7 ETM+ Data in the Red Sea (Hurghada, Egypt)” International Journal of Remote Sensing (Revision Under Preparation)
2. **El-Askary, H.M.**, Allali, M., Rakovski, C., Prasad, A.K., Kafatos, M., and Struppa, D., “Computational Methods for Climate Data”, Wiley Interdisciplinary Reviews: Computational Statistics, WIREs Comp Stat. doi: 10.1002/wics.1213, 2012.
3. Kaskaoutis, D. G., Prasad, A.K., Kosmopoulos, P.G., Sinha, P.R., Kharol, S.K., Gupta, P., **El-Askary, H.M.**, and Kafatos, M., “Synergistic use of remote sensing and modeling for tracing dust storms in the Mediterranean” Advances in Meteorology, Volume 2012, Article ID 861026, doi:10.1155/2012/861026 2012.
4. *Marey, H. S.*, Gille, J. C., **El-Askary, H. M.**, Shalaby, E. A., and El-Raey, M. E.: Aerosol Climatology over Nile Delta based on MODIS, MISR and OMI satellite data, Atmos. Chem. Phys., 11, 10637-10648, 2011.
5. Gerasopoulos, E., Amiridis, V., Kazadzis, S., Kokkalis, P., Eleftheratos, K., Andreae, M.O., Andreae T.W., **El-Askary, H.**, Zerefos, C.S., “Three-year ground based measurements of Aerosol Optical Depth over the Eastern Mediterranean: the urban environment of Athens” Atmos. Chem. Phys., 11, 2145–2159, doi:10.5194/acp-11-2145-2011, 2011.
6. Agustin Sanchez-Arcilla, Cesar Mosso, Joan Pau Sierra, Marc Mestres, Ali Harzallah, Mohamed Senouci, Mohamed El Raey and **Hesham El-Askary**, “Erratum to: Climatic drivers of potential hazards in Mediterranean coasts”, Journal of Regional Environmental Change, DOI: 10.1007/s10113-011-0206-0, 11(3) p. 637, 2011. The online version of the original article can be found under doi:10.1007/s10113-010-0193-6.
7. *Marey H.*, Gille J., **El-Askary H.**, Shalaby S., and El-Raey M., “Study of the formation of the "Black Cloud" and its dynamics over Cairo, Egypt using MODIS and MISR sensors”, Journal of Geophysical Research, 115, D21206, doi:10.1029/2010JD014384, 2010.
8. Prasad A. K., **El-Askary H.**, and Kafatos M., “High altitude dust transport over Nile Delta during biomass burning season”, Environmental Pollution, 158, 3385-3391, 2010 doi: 10.1016/j.envpol.2010.07.035.

	<ol style="list-style-type: none"> 9. Prasad A. K., K.-H. S. Yang, El-Askary H., and M. Kafatos M., “Melting of major Glaciers in the western Himalayas: evidence of climatic changes from long term MSU derived tropospheric temperature trend (1979-2008)” <i>Annales Geophysicae</i> 27, 4505–4519, 2009. 10. El-Askary H., <i>Farouk R.</i>, Ichoku C., and Kafatos M., “Inter-continental transport of dust and pollution aerosols across Alexandria, Egypt” <i>Annales Geophysicae</i> 27, 2869–2879, 2009. 11. El-Askary H., and Kafatos M., “Dust Storm and Black Cloud Influence on Aerosol Optical Properties over Cairo and the Greater Delta Region, Egypt” <i>International Journal of Remote Sensing</i> 29(24): 7199–7211, 2008, doi: 10.1080/01431160802144179 12. <i>Agarwal A.</i>, El-Askary H., El-Ghazawi T., Kafatos M., and Le-Moigne J., “Efficient PCA Fusion Techniques for MISR Multi-angle Observations with Applications to Monitoring Dust Storms” <i>IEEE .Geosc. and Remote Sensing Letters</i>, 4(4): 678-682, 2007, doi: 10.1109/LGRS.2007.904467. 13. El-Askary H., “Air pollution Impact on Aerosol Variability over mega cities using Remote Sensing Technology: Case study, Cairo,” <i>Egyptian Journal of Remote Sensing and Space Science</i>, V. 9, 31-40, 2006. 14. El-Askary H., Gautam R., Singh R. P., and Kafatos M., “Dust Storms Detection over the Indo-Gangetic basin using multi sensor data,” <i>Advances in Space Research Journal</i>, 37: 728-733, 2006, doi:10.1016/j.asr.2005.03.134. 15. El-Askary H., Sarkar S., Chiu L., Kafatos M., and El-Gahzawi T., “Rain Gauge Derived Precipitation Variability over Virginia and its Relation with the EL NINO Southern Oscillation (ENSO),” <i>Advances in Space Research Journal</i>, 33: 338-342, 2004, doi:10.1016/S0273-1177(03)00478-2. 16. El-Askary H., Gautam R., and Kafatos M., “Remote Sensing of Dust Storms over the Indo-Gangetic Basin,” <i>Indian Journal of Remote Sensing</i>, 32(2): 121-124, 2004, doi: 10.1007/BF03030869. 17. El-Askary H., Sarkar, S., Kafatos, M., and El-Gazawi, T., “A Multi-Sensor Approach to Dust Storm Monitoring over the Nile Delta,” <i>IEEE Trans. Geosc. Remote Sensing</i>, 41(10): 2386-2391, 2003, doi: 10.1109/TGRS.2003.817189. 18. El-Askary H., Kafatos M., and Hegazy M. “Dust Storms over Egypt using satellite data,” <i>Egyptian Journal of Remote Sensing and Space Sciences</i>, III: 113-124, 2002.
<p>Book Chapters</p>	<ol style="list-style-type: none"> 1. El-Askary H., Prasad A.K., Kallos G., El-Raey M., and Kafatos M., Analyzing Black Cloud Dynamics over Cairo, Nile Delta Region and Alexandria using Aerosols and Water Vapor Data Chapter 12 in InTECH open access publisher “Book: Air Quality-Models and Applications”, ISBN 978-953-307-307-1, 2011. http://www.intechopen.com/articles/show/title/analyzing-black-cloud-dynamics-over-cairo-nile-delta-region-and-alexandria-using-aerosols-and-water- 2. Prasad A.K., El-Askary H., Asrar G.R., Kafatos M., and Ashok

	<p>Jaswal “Melting of Major Glaciers in Himalayas: Role of Desert Dust and Anthropogenic Aerosols” Chapter 5 in InTECH open access publisher “Book: Planet Earth 2011- Global Warming Challenges and opportunities for policy and practice”, ISBN 978-953-307-733-8, 2011. http://www.intechopen.com/articles/show/title/melting-of-major-glaciers-in-himalayas-role-of-desert-dust-and-anthropogenic-aerosols</p> <ol style="list-style-type: none"> 3. Goodess C.M., Agnew M.D., Giannakopoulos C., Hemming D., Bindi M., Bradai M. N., Congedi L., Dibari C., El-Askary H., El-Raey M., Ferrise R., Founda D., Grünzweig J., Harzallah A., Hatzaki M., Kay G., Kostopoulou E., Lionello P., Mösso C., Oweis T., Psiloglou B., Reale M., Salem S. B., Sanchez-Arcilla A., Senouci M., Tanzarella A. and Varotsos K. 2011. Integration of the climate impact assessments with future projections. In Regional Assessment of Climate Change in the Mediterranean: A. Navarra, L. Tubiana (Eds.) Springer, Dordrecht, The Netherlands. (In Press) 4. Al-Agamii D., Ramadan A., El-Raey M., El-Askary H., El-Wadaii A.A., Hadad A., Ashaa B.O., and Tawfik M.A., “Atmosphere,” Chapter 7 in “The Environment Outlook for the Arab Region” United Nations Environmental Program (UNEP) Press, United Nations (UN), 2010. (Arabic Version released, but the English version (In Press) http://www.unep.org/dewa/westasia/eoar/) 5. El-Askary H., and Kafatos M., “Natural and Anthropogenic Aerosol-Related Hazards Affecting Megacities,” Chapter 10 in “Large-Scale Disasters: Prediction, Control and Mitigation” <i>Cambridge University Press</i>, ISBN 978-0-521-87293-5, 2007.
<p>Full Papers in Conference Proceedings</p>	<ol style="list-style-type: none"> 1. Menas Kafatos, Anup Krishna Prasad, Hesham M. El-Askary, Dimitris G. Kaskaoutis, “Correlation, Vertical Distribution and Column Integrated Characteristics of Aerosols during Winter-time Dust Storms over the Mediterranean region”, The 26th International Laser Radar Conference (ILRC), Porto Heli, Peloponnesus, Greece, 25-29 June 2012 2. Anup K. Prasad, Hesham M. El-Askary, Ghassem R. Asrar, Menas Kafatos and Ashok Jaswal, “Wintertime and Pre-monsoon warming over Himalayan-Tibet Glaciers and Indo-Gangetic plains: Role of desert dust and anthropogenic emissions”, International Symposium on Remote Sensing ISRS 2011. The Ocean Resort, YEOSU, Korea, November, 2 – 4 2011. 3. El-Askary H., “Remote Sensing Observations of Yellow Sand Sandstorms”, International Symposium on Desertification and Climate Change, Seoul, South Korea, June 9, 2009. 4. <u>Agarwal A.</u>, El-Ghazawi T., El-Askary H., and Le-Moigne J., “Efficient Hierarchical-PCA Dimension Reduction for Hyperspectral Imagery” 7th <i>IEEE Symposium on Signal Processing and information Technology</i>, Cairo, Egypt, December 15-18, 2007. 5. El-Askary H., and Kafatos M, “Investigation of thermal inversions as a major contributor to the Black Cloud episodes over

	<p>Cairo,” <i>IEEE International Geoscience and Remote Sensing Symposium IGARSS2007</i>, Barcelona, Spain, July 23- July 27, 2007.</p> <ol style="list-style-type: none"> 6. El-Askary H., and Kafatos M., “Potential for Dust Storms Detection Through Aerosol Radiative Forcing on Atmospheric Parameters,” <i>IEEE International Geoscience and Remote Sensing Symposium IGARSS2006</i>, Denver, Colorado, USA July 31-August 4, 2006. 7. El-Askary H., and Kafatos M., “Optical remote Sensing Technologies for Dust Storms Monitoring and Detection,” <i>Kuwait First International Remote Sensing Conference and Exhibition</i>, Kuwait, September 26-28, 2005. 8. El-Askary H., <u>Agarwal A.</u>, El-Ghazawi T., Kafatos M., and Le-Moigne J., “Enhancing Dust Storm Detection Using PCA based Data Fusion,” <i>IEEE International Geoscience and Remote Sensing Symposium IGARSS2005</i>, Seoul, Korea, July 25-29, 2005. 9. El-Askary H., Kafatos M., Xue L., and El-Ghazawi T., “Introducing new techniques for Dust Storm Monitoring,” <i>IEEE International Geoscience and Remote Sensing Symposium IGARSS2003</i>, Toulouse, France, IV: 2439 - 2441, July 21-25, DOI 10.1109/IGARSS.2003.1294468, 2003. 10. El-Askary H., M. Kafatos and M. Hegazy, “Environmental Monitoring Of Dust Storms Over The Nile Delta, Egypt Using MODIS Satellite Data,” <i>Proceedings Of Third International Symposium Remote Sensing of Urban Areas</i>, p. 452. Istanbul, Turkey, June 2002. 11. Menas Kafatos, Hesham El-Askary, Long Chiu, Richard Gomez, Mohamed Hegazy, Jason Kinser, Xue Liu, Yang Liu, Zhong Liu, Jim McManus, Yixiang Nie, John Qu, Foudan Salem, Sudipta Sarkar, Suhung Shen, George Taylor, Hank Wolf, David Wong, Chaowei Yang, Kwang-Su Yang and Ruixin Yang, “Remote Sensing and GIS for Regional Environmental Applications,” <i>The International Society for Optical Engineering (SPIE)</i>, Crete, Greece, 4886, pp. 1-10, 23 - 27 September 2002.
<p style="text-align: center;">Other Conference Publications</p>	<ol style="list-style-type: none"> 1. Hesham M. El-Askary, Anup K. Prasad, <u>Heba M. Marey</u>, Mohamed E. El-Raey, Ghassem R. Asrar and Menas Kafatos “The dynamics of the biomass burning, dust storms, and black cloud formation over Nile Delta, Egypt using a multi sensor approach” AOGS – AGU (WPGM) Joint Assembly, Singapore, 13 - 17 August, 2012. 2. Anup K. Prasad, Sachchidanand Singh, Hesham M. El-Askary, Ashok Jaswal, Ghassem R. Asrar and Menas Kafatos “A decade of snow extent, snow water equivalent, snow deposition and melt season dynamics over Himalayas using EOS Terra and Aqua (2000-2012)” AOGS – AGU (WPGM) Joint Assembly, Singapore, 13 - 17 August, 2012. 3. Menas Kafatos, Hesham M. El-Askary, <u>Nick Hatzopoulos</u>, Jinwon Kim, Seung Hee Kim, David Medvigy, Anup K. Prasad, <u>David Stack</u>, Craig Tremback, Robert Walko, and Ghassem Asrar “Assessment of Agro-Ecosystem over California using Multi-Model Simulations and Satellite Observations” AOGS – AGU

- (WPGM) Joint Assembly, Singapore, 13 - 17 August, 2012.
4. Ghassem R. Asrar, Anup K. Prasad, **Hesham M. El-Askary**, Menas Kafatos and Ashok Jaswal “Retreat of Himalayan Glaciers: impact of anthropogenic pollution and dust storms on the regional climate” AOGS – AGU (WPGM) Joint Assembly, Singapore, 13 - 17 August, 2012.
 5. **Hesham M. El-Askary**, Anup K. Prasad, *Heba M. Marey*, Mohamed E. El-Raey, Ghassem R. Asrar and Menas Kafatos “A multi sensor approach for studying and analyzing the formation and dynamics of the black cloud over Cairo, Egypt” IEEE International Geoscience and Remote Sensing Symposium IGARSS2012, 22 July ~ 27 July, Munich, Germany, 2012.
 6. **Hesham M. El-Askary**, Anup K. Prasad, *Heba M. Marey*, Mohamed E. El-Raey, Ghassem R. Asrar and Menas Kafatos “Studying and analyzing the formation and dynamics of the black cloud over Cairo, Egypt, using a multi sensor approach”, European Geoscience Union, Vienna, Austria, April 22-27, 2012.
 7. **Hesham Mohamed El-Askary**, Walaa Sheta, Anup Krishna Prasad, *Hanan Ali*, Mohamed Abdel Rahman, Ayman El-Desouki, Menas Kafatos, “Studying Air Quality Dynamics using A Linear Genetic Programming Approach over Remotely Sensed Atmospheric Parameters: case study (Cairo, Egypt)”, American Geophysical Union, SanFrancisco, December 05-09, 2011.
 8. Anup Prasad, **Hesham El-Askary**, Ghassem Asrar, Menas Kafatos, Ashok Jaswal, “Impact of dust storms and anthropogenic aerosols on the snow cover and glaciers of the Indo-Gangetic plains and Himalaya region”, American Geophysical Union, SanFrancisco, December 05-09, 2011.
 9. Menas Kafatos, Ghassem R Asrar, **Hesham Mohamed El-Askary**, *Nikolaos Hatzopoulos*, Katharine Hayhoe, Jinwon Kim, Lewis Ziska, David Medvigy, Anup Krishna Prasad, Craig Treback, Robert L Walko, “Assessing Impacts of Climate Variability and Change on the Agro-ecosystems in California and Southwestern United States”, American Geophysical Union, SanFrancisco, December 05-09, 2011.
 10. *H. S. Marey*; J. C. Gille; **H. M. El-Askary**; E. A. Shalaby; M. El-Raey, “Analysis of carbon monoxide levels over Nile Delta, Egypt, using MOPITT satellite data”, American Geophysical Union, SanFrancisco, December 05-09, 2011.
 11. Menas Kafatos, Ghassem R Asrar, **Hesham Mohamed El-Askary**, Anup Prasad, Katharine Hayhoe, Jinwon Kim, and Craig Treback, “Multi-Model Simulations and satellite observations for Assessing Impacts of Climate Variability on the Agro-ecosystems” The Third Santa Fe Conference on Global and Regional Climate Variability, October 31-November 4, 2011.
 12. Anup K. Prasad, **Hesham M. El-Askary**, *Sunmin Park*, Woo-Kyun Lee and Menas Kafatos, “Dust Cloud detection over China-Korea-Japan using CALIPSO, Cloudsat during yellow dust season”, International Symposium on Remote Sensing ISRS 2011. The Ocean Resort, YEOSU, Korea, November, 2 – 4 2011.

13. Anup K. Prasad, **Hesham M. El-Askary**, Ghassem R. Asrar, Menas Kafatos and Ashok Jaswal, “Wintertime and Pre-monsoon warming over Himalayan-Tibet Glaciers and Indo-Gangetic plains: Role of desert dust and anthropogenic emissions”, International Symposium on Remote Sensing ISRS 2011. The Ocean Resort, YEOSU, Korea, November, 2 – 4 2011.
14. Anup Prasad, Ghassem Asrar, **Hesham El-Askary**, Menas Kafatos, “Impact of dust storms and anthropogenic emissions on the Indo-Gangetic Basin and melting of Himalayan Glaciers” WCRP Open Science Conference: Climate Research in Service to Society, 24-28 October Denver, CO, USA, 2011.
15. Menas Kafatos, **Hesham Mohamed El-Askary**, Anup Krishna Prasad, “Multi Sensor Observations on the Implications of desert dust transport to the Nile Delta, the Indo-Gangetic Basin and Himalayan Glaciers”, The Sixth International Workshop on Sandstorms and Environmental Impact Assessments, Glyfada-Athens, Greece, on 7-9 September 2011.
16. Menas Kafatos, Ghassem Asrar, **Hesham El-Askary**, Jinwon Kim, Woo-Kyun Lee, Seon K. Park, Anup Prasad, Craig Tremback, Robert Walko, “Multi-Model Simulations and Satellite Observations for Agriculture and Ecosystems Climate Change Impacts”, IEEE International Geoscience and Remote Sensing Symposium IGARSS2011, 24 July ~ 29 July, Vancouver, Canada, 2011.
17. Ghassem Asrar, Anup Prasad, **Hesham El-Askary**, Menas Kafatos, “Multi-Sensor Observations of Climate Change Impacts on the Indo-Gangetic Basin and Himalayan Glaciers”, IEEE International Geoscience and Remote Sensing Symposium IGARSS2011, 24 July ~ 29 July, Vancouver, Canada, 2011.
18. Sunmin P., **El-Askary H.**, Kwon T.H., Woo-Kyun L., and Kafatos M., “Spatial and Temporal Characteristics of Air Pollutants over Seoul”, International Symposium of Remote Sensing, 2nd Workshop on Environmental Geospatial Information, 27 October ~ 29 October, 2010, Jeju, Korea
19. H. S. Marey; J. C. Gille; **H. M. El-Askary**; E. A. Shalaby; M. El-Raey, “Study of the formation of the “Black Cloud” and its dynamics over Cairo, Egypt using MODIS and MISR sensors”, American Geophysical Union, SanFrancisco, December 13-17, 2010.
20. **H. M. El-Askary**; A. K. Prasad; M. Kafatos, “Black cloud and transport of anthropogenic pollution across the Mediterranean Sea over Nile Delta region in Egypt during Fall season”, American Geophysical Union, SanFrancisco, December 13-17, 2010.
21. W. Lee; S. Yoo; S. Choi; H. Kwak; S. Park; M. Kafatos; **H. M. El-Askary**; A. K. Prasad, “Regional climate change modeling and observations for Korea”, American Geophysical Union, SanFrancisco, December 13-17, 2010.
22. M. Kafatos; **H. M. El-Askary**; G. Galanis; N. Hatzopoulos; X. Liu; D. P. Ouzounov; A. K. Prasad; C. Tremback, “An Integrated Modeling and Observing System with Near Real-Time Applications”, American Geophysical Union, SanFrancisco,

December 13-17, 2010.

23. A. K. Prasad; P. Chan; **H. M. El-Askary**; *N. Hatzopoulos*; J. Kim; X. Liu; D. P. Ouzounov; S. K. Park; C. Tremback; M. Kafatos, “An Integrated Modeling and Observing System for Hazards and Regional Climate Simulations”, American Geophysical Union, San Francisco, December 13-17, 2010.
24. Prasad A. K., **El-Askary H.**, El-Raey M., and Kafatos M., “Contribution of dust transport to the local pollution during biomass burning season over Nile Delta” 7th Annual Meeting and Geosciences World Community Exhibition, Hyderabad International Convention Centre, India, July 5-9, 2010.
25. **El-Askary H.**, Hattab M., El-Raey M., and Kafatos M., “Impact of Sea Level Rise on the Low Land Area South East of Alexandria, Egypt” American Geophysical Union, San Francisco, December 14-19, 2009.
26. Prasad A.K., **El-Askary H.**, and Kafatos M., “Long term MSU tropospheric and ground temperature trends (1979-2008) over Africa” American Geophysical Union, San Francisco, December 14-19, 2009.
27. *El-Sayed H.*, and **El-Askary H.**, “Environmental Investigation of Lake Maryut, West of Alexandria, Egypt using Remote Sensing technology”, Contemporary Environmental Issues in Arid and Semi-Arid Regions Alexandria, Egypt, November 2008.
28. *Aboelfetouh Y.*, **El-Askary H.**, and El-Raey M., “Investigating the vertical profiles distribution of the Tropospheric Emission Spectrometer (TES) parameters over Cairo, Egypt,” Contemporary Environmental Issues in Arid and Semi-Arid Regions Alexandria, Egypt, November 2008.
29. *Osman M.*, **El-Askary H.**, and Ramadan A. M., “Analysis of Climate Change Indicators over the Mediterranean Basin,” Contemporary Environmental Issues in Arid and Semi-Arid Regions Alexandria, Egypt, November 2008.
30. *Hamdy S.*, **El-Askary H.**, and El-Raey M., “Change Detection Analysis of Coral Reefs over Hurghada using Satellite Images” Contemporary Environmental Issues in Arid and Semi-Arid Regions Alexandria, Egypt, November 2008.
31. **El-Askary H.**, “Atmospheric related applications, High Performance computing perspective” U.S.–Egypt Workshop on High Performance computing and its applications for remote sensing, Cairo, Egypt, May 12–15, 2008.
32. **El-Askary H.**, and Kafatos M., “Investigation of major atmospheric contributors to the Black Cloud episodes over Cairo,” First International Conference: From Deserts to Monsoons, Crete, Greece, 1-6 June, 2008.
33. Goddess C.M., Angew M., Giannakopoulos C., Hemming D., Kostopoulou E., Fadel M., **El-Askary H.**, Bindi M., Lionello P., Pino C., Gruenzweig J., Oweis T., Karrou M., Sanchez-Arcilla A., Aranda C. M., Senouci M., Harzallah A., El Raey M., Betts R., and McCarthy M., “Cross-sectoral impacts and adaptation assessments,” European Geosciences Union, General Assembly 2008, Vienna, Austria, 13-18 April, 2008.

34. **El-Askary H.**, and Kafatos M., “Analyzing the influence of the Nile Delta major pollution episode during autumn time,” European Geosciences Union, General Assembly 2008, Vienna, Austria, 13-18 April, 2008.
35. **El-Askary H.**, and Kafatos M., “Remote Sensing of Dust Storms and Air Pollution Episodes over Cairo and Greater Delta Region,” *6th AARSE International Conference on Earth Observation & Geoinformation Sciences in Support of Africa’s Development*, Cairo, Egypt, 30 October – 2 November 2006.
36. **El-Askary H.**, Kader M., Sultan, H., and Sherif A., “Aerosol Variability over Cairo using Remote Sensing Technology,” U.S.–Egypt Workshop on Predictive Methodologies for Global Weather-Related Disasters Cairo, Egypt, March 13–15, 2006.
37. Kafatos M., Singh R. P., **El-Askary H.**, and Qu J., “Natural and Anthropogenic Aerosols in the World's Megacities and Climate Impacts” *Eos Trans. AGU*, 85(17), Joint. Assem. Suppl., San Francisco, USA December 5-9, 2005.
38. Kafatos M., **El-Askary H.**, and Kallos G., “Potential of Dust Storms Early Warning Using Multiple Remote Sensing Measurements and Mesoscale Modeling,” *35th COSPAR Scien. Assem.* Paris, France July 18-25, 2004.
39. **El-Askary H.**, Gautam R., Singh R., and Kafatos M., “Mapping of Dust Storms over the Indo-Gangetic Basin using Multi Sensor Data, ” *Committee On Space Research 35th COSPAR Scientific Assembly*, Paris, France July 18-25, 2004.
40. Kafatos M., **El-Askary H.**, and Kallos G., “Potential For Early Warning of Dust Storms,” *Int. Symp. on Sand and Dust Storm*, Beijing, China September 12-14, 2004.
41. **El-Askary H.**, Kafatos M. and Chiu L., “ENSO impact on Precipitation Variability Over the Virginia and Mid-Atlantic,” *Eos Trans. AGU*, 85(17), Joint. Assem. Suppl., San Francisco, USA December 13-17, 2004.
42. Menas Kafatos, Chaowei Yang, Ruixin Yang, Jianhe Qu, David Wong, **Hesham El-Askary**, Sudipta Sarkar, Foudan Salem, Long Chiu, Richard Gomez, Mohamed Hegazy, Jim McManus, George Taylor, and Hank Wolf. “Remote Sensing & GIS Distributed Applications,” *Proceedings of Geoinformatics*, Nanjing, China, June 1-3, 2002.
43. **El-Askary H.**, Sarkar S., Chiu L., Kafatos M., and El-Gahzawi T., “Rain Gauge Derived Precipitation Variability over Virginia and its Relation with the EL NINO Southern Oscillation (ENSO),” *Committee On Space Research 34th COSPAR Scientific Assembly*, The Second World Space Congress, Houston, TX, USA, 10-19 October 2002.
44. **Hesham El-Askary**, Mohamed Hegazy, Steven Jackson, Menas Kafatos, David Wong and Long Chiu, “Flash Flood Risk Estimation in GIS using Morphometric Parameters,” *Conference on Earth-Observing and Atmosphere-Land-Ocean Interaction (COAA)* Fairfax, VA. USA, 26 October 2002.
45. **Hesham El-Askary**, Sudipta Sarkar, Long Chiu, Menas Kafatos and Tarek El-Ghazawi “EL NINO Southern Oscillation impact on

	Virginia Precipitation," Conference on Earth-Observing and Atmosphere-Land-Ocean Interaction (COAA) Fairfax, VA. USA, 26 October 2002.
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PRESENTATIONS AND INVITED TALKS IN PROFESSIONAL MEETINGS

1. Istituto Nazionale di Geofisica e Vulcanologia Sede di Bologna, Italy
 - Title: "Climate Change Impact on Sea Level Rise on Northern Egypt" **May 2011**
2. National Authority of Remote Sensing and Space Sciences, Cairo, Egypt
 - Title: "Decision Support System for Managing Natural Hazards" **June 2010**
3. Center for Climate/Environment Change Prediction Research (SSRC), EHWU University, Seoul, Korea.
 - Title: "Impact of Sea Level Rise on the Low Land Area South East of Alexandria, Egypt" **January 2010**
4. Department of Environmental Science and Ecological Engineering, Korea University, Seoul, Korea.
 - Title: "Remote Sensing Techniques and Applications in Climate Change and Global Environmental Change workshop" **June 2009**
5. Schmid College of Science, Chapman University, Science Forum Series
 - Title: "Remote Sensing of atmospheric pollution" **February 2009**
6. Istituto Nazionale di Geofisica e Vulcanologia, Bologna, Italy held in Athens
 - Title: "Climate change and Impact Research" **May 2008**
7. Arab Academy School (IGCSE section) Alexandria, Egypt
 - Title: "Global Warming Night, Egypt where we stand?" **December 2007**
8. Habbi Center For Environmental Rights, Al Ain Al Sokhna, Egypt
 - Title: "Climate Change and its impact on Egypt" **December 2007**
9. Environment (Bea3ty) Channel, Nile Sat, Cairo, Egypt
 - Title: "Using the satellite technology for studying the black cloud over Cairo and the Delta, Egypt" **November 2007**
10. Channel 5, Direct broadcasting Alexandria, Egypt
 - Title: "Using the satellite technology for studying the black cloud over Cairo and the Delta, Egypt" **September 2007**
11. Stockholm Environment Institute (SEI), Oxford, UK
 - Title: "Adaptation and stake holders to Climate change and Sea Level Rise in Alexandria, Egypt" **June 2007**
12. Istituto Nazionale di Geofisica e Vulcanologia, Bologna, Italy
 - Title: "Urban and Coastal case studies for Climate change and Sea Level Rise in Alexandria, Egypt" **May 2007**
13. Department of Chemistry, Faculty of Science, Alexandria University, Alexandria, Egypt
 - Title: "Remote Sensing of Fires" **November 2005**
14. Department of Environmental Studies, Faculty of Science, Alexandria University, Alexandria, Egypt
 - Title: "Remote Sensing of Natural Hazards" **October 2005**
15. Department of Environmental Studies, Faculty of Science, Alexandria University, Alexandria, Egypt
 - Title: "Regional Monitoring of Environmental Physics Climate Related Anomalies" **September 2005**
16. University of Athens, Athens, Greece
 - Title: "Environmental Impacts and Assessments for different Climate Related Applications Over Egypt" **April 2005**
17. Ocean-Land-Atmosphere Studies (COLA), Maryland, USA

- Title: "Precipitation Variability over Virginia and its relation with El Nino Southern Oscillation" **April 2004**
- 18. George Mason University, Colloquia Series, Fairfax, VA, USA
 - Title: "Multi Sensor Detection of Dust Storms" **November 2003**
- 19. Michael Baker Corporation, Alexandria, VA, USA
 - Title: "Geoenvironmental Monitoring for Fairfax County Assessment of Natural Resources and Hazards" **January 2002**
- 20. Earth Analysis Data Center (EDAC), University of New Mexico, Albuquerque, USA
 - Title: "Estimating Flash Flood Hazard Risk using remote sensing and GIS Technology" **June 2002**
- 21. Earth Analysis Data Center (EDAC), University of New Mexico, Albuquerque, USA
 - Title: "The Ground Precipitation Gauge Data Study over Virginia Drainage Basins" **June 2002**
- 22. Department of Environmental Studies, Faculty of Science, Alexandria University, Alexandria, Egypt
 - Title: "Remote Sensing Applications Over Egypt" **July 2001**
- 23. Fairfax County Geographic Information Services, Fairfax, VA, USA
 - Title: "A plan of work for Estimating Flash Flood Hazard in Pond Branch Basin in Fairfax County" **November 2001**
- 24. National Authority for Remote Sensing and Space Sciences (NARSS), Cairo, Egypt
 - Title: "Introducing new Remote Sensing Techniques and possible uses; Hyperspectral Sensing" **November 2000**

CAREER DEVELOPMENT TRAINING COURSES

- Attended the Teacher Misbehavior workshop, Chapman University teaching mentor program, Faculty dialogues on teaching and learning. **October 2011**
- Attended the Teaching well and loving it: Challenges and Best Practices workshop, Chapman University teaching mentor program, Faculty dialogues on teaching and learning **November 2011**
- Attended workshop on writing research proposals, Alexandria University **January 2008**
- Attended workshop on research management, Alexandria University **October 2006**
- Attended workshop on ways of teaching and student interaction, Faculty of Fine Arts, Alexandria University, Egypt **July 2005**
- Attended workshop on Skills of Interactive Presentation **June 2005**
- Attended workshop on Skills of Interactive Communication **June 2005**
- Attended work shop and a certified user of HYSPLIT model in National Oceanic and Atmospheric Administration (NOAA), Air Resources Laboratory USA, **April 2005**
- Attended a workshop for Earth Science Satellite Remote Sensing Data Processing, Analysis and Applications, George Mason University **March 2003**

COURSES TAUGHT/CO-TAUGHT (UNDERGRADUATE AND GRADUATE)

Faculty of Science, Alexandria University	<ol style="list-style-type: none"> 1. PHY 351: Electrodynamics and Remote Sensing Techniques 2. GEOG 324: Geophysics, Photo Geology and Survey 3. ENV 405: Remote Sensing 4. ENV 523: Laser Applications in Environmental Science 5. ENV 623: Environmental Research Methodology 6. ENV 624: Environmental Data Analysis 7. ENV 628: Atmospheric Changes
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	8. ENV 629: Environmental Remote Sensing 9. ENV 633: Applied Geophysics 10. ENV 406: Environmental Pollution and Environmental Health 11. ENV 321: Environmental Geology and Non-Living Resources
College of Science, George Mason University	1. EOS 759: Introduction to Natural hazards and remote sensing 2. EOS 753: Earth observation
Chapman University	1. ENV112: Introduction to Natural Hazards and Global Environmental change 2. HGEC510: Introduction to Natural Hazards 3. PHYS520: Physical Principles of Remote Sensing

UNDERGRADUATE SCIENCE PROJECTS ADVISOR

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GRADUATE COMMITTEES CHAIR AND CO-ADVISOR

Master's Degrees	1. Sabry Abd El Mohsen Mohamed “Geo electric survey, ground and remotely sensed data analysis for studying environmental pollution over selected areas in Alexandria and Elbehera Governorates”, Department of Physics, Faculty of Science, Alexandria University, Egypt. Current 2. David Stack “Extending the APSIM crop model: a pilot study in regional scale yield simulation”, School of Earth and Environmental Sciences, Schmid College of Science and Technology, Chapman University. 2012 3. Mariam Osmane, “Analysis of Climate Change Indicators over the Mediterranean Basin”, Department of Environmental Studies, Faculty of Science, Alexandria University, Egypt. 2012 4. Yasmin Ahmed Sami Abo el Fetouh, “Satellite for Remote Sensing of Air Pollution Over Egypt”, Institute of Graduate Studies and Research, Department of Environmental Studies, Alexandria University, Egypt. 2012 5. Sunmin Park “Comparative analysis on interpolation methods for spatial distribution of air pollutants in Seoul” Department of Climate Environment Graduate School of Life and Environmental Sciences, Korea University, Seoul, Korea. 2011 6. Hossam El-Dien Mohammed El-Sayed “Environmental Investigation on Lake Maryut, West of Alexandria, Egypt: Geochemical, Geophysical and Remote Sensing Studies”, Department of Geology, Faculty of Science, Alexandria University, Egypt. 2010 7. Sara Hamdy Abd Elmoula, “Remote Sensing of Coral Reefs Case Study: South of Suez Gulf”, Institute of Graduate Studies and Research, Department of Environmental Studies, Alexandria University, Egypt. 2009 8. Rania Farouk, “Air pollution Monitoring using Micro tops instrument over Alexandria”, Department of Environmental Studies, Faculty of Science, Alexandria University, Egypt. 2008
Ph.D Degrees	1. Abhishek Agarwal, “Efficient PCA Fusion Techniques for

	Monitoring Dust Storms using MISR Multi-angle Observations”, George Washington University, USA (Not Official Yet)
	2. Heballah Saed, “Remote Sensing of Air quality over Cairo, Case study: Black Cloud”, Institute of Graduate Studies and Research, Department of Environmental Studies, Alexandria University, Egypt, (Currently at NCAR, BO, Colorado). <u>2011</u>

AWARDS RECEIVED

Honor Awards	<ul style="list-style-type: none"> • Valerie Scudder Award – in recognition of outstanding achievement in teaching, scholarly/creative activity, and service to the University <u>2012</u> • Award of Excellence in Scholarly/Creative Activity, Chapman University <u>2011</u> • Faculty of Science Award for winning the Saudi Arabia Prize for the best article in Environmental Management <u>2006</u> • Postdoctoral Fellowship, Center for Earth Observing and Space Research George Mason University <u>2004–2005</u> • Medal in the Honor Society of International Scholars (Phi Beta Delta) <u>2002</u> • Governmental Scholarship for Doctoral Degree in Environmental physics and Remote Sensing from George Mason University, USA <u>2000</u> • University medal for graduating as the first of Faculty of Science among all departments and highest score ever in the history of the Faculty of Science <u>1997</u>
Winning Competitions	<ul style="list-style-type: none"> • Saudi Arabia Prize for Best Published Article in Environmental Management among 150 articles from the Arab Administrative Development Organization, affiliated with the League of Arab States <u>2006</u> • University medal for wining first position in Faculty of Science, Alexandria University, and third position over the Country’s Universities in the competition of ideal student <u>1996</u>
Travel Awards	<ul style="list-style-type: none"> • Travel Award to Tunisia representing Egyptian universities after wining ideal student competition <u>1996</u>

AFFILIATIONS

- Member of the Honor Society of International Scholars (Phi Beta Delta).
- Associate member of the Committee on Space Research (COSPAR).
- Member of the American Geophysical Union (AGU).
- Member of the European Geophysical Union (EGU).
- Member of the Asia Oceania Geoscience Society (AOGS).
- Member of the Egyptian nonprofit organization “Friends of the Environment”
- Member of the Sensors committee through NARSS for research and development.
- Member of the IEEE and remote sensing society.
- Elected Member, The international advisory council of the climate change center affiliated with the Korea Green Foundation.

TECHNICAL PROFICIENCY

Technical Area	Product	Proficiency
Remote Sensing/Image Processing	• ENVI	• Expert
	• ERDAS	• Good
	• Matlab	• Very Good
	• Orbit Viewer	• Very Good
GIS Software	• ESRI Products	• Very Good
	• IDRISI GIS	• Good
Statistics/Time Series Analysis	• Matlab	• Expert
	• SPSS	• Very Good
	• EXCEL	• Expert
	• SPlus	• Good
Operating Systems	• SGI Irix, Linux	• Very Good
	• Windows NT, XP, Prof.	• Expert
Programming Languages	• C++	• Good
	• Java Script	• Very Good
	• HTML	• Very Good

RESEARCH INTERESTS

- Global environmental change
- Atmospheric pollution over megacities
- Visualizing and Analyzing Earth Science data
- Interdisciplinary studies in Earth system science, including precipitation and climate Phenomena coupling.
- Dust storms monitoring using multisensor approaches.
- Change detections and Land use/land cover assessments.
- Model coupling with remote sensing for dust storms detection.
- Flash Flood Hazards Mitigation and detecting the effect of the ENSO signal with different climatic parameters and GIS applications.

TEACHING COURSES INCLUDE

Remote Sensing And GIS	<ul style="list-style-type: none"> • Physical principles of Remote Sensing • Earth Observation and remote sensing Data/Systems • Introduction Hyperspectral Sensing • Environmental Remote Sensing • Remote Sensing Applications and Climate Change • Advanced Remote Sensing • Introduction to Geographic Information System • GIS applications
Earth Sciences	<ul style="list-style-type: none"> • Earth System Sciences and Global Change • Natural Hazards • Introduction to Meteorology • Atmospheric Processes and Climate Change • Observing Earth & its Climate • Introduction to Earth System Science

	<ul style="list-style-type: none"> • Physics of the Atmosphere
Physics and Geophysics	<ul style="list-style-type: none"> • Electricity and Magnetism • Electronics and Waves • Heat and Thermodynamics • Optics and Properties of Matter • Introduction to Laser and its Applications • Applied Geophysics

SYNERGISTIC ACTIVITIES

- **Title:** “Studying the impact of Sea Level Rise (SLR) over the Nile Delta: A Multisensor Approach” **Funding:** Chapman University (2012-2013) **Role:** PI
- **Title:** “Collaborative Research: Type 1 - Multi-Model Regional Simulation of Climate Change Impacts on Agriculture and Ecosystems in the Southwestern United States” **Funding:** USDA-NSF-NIFA (2011-2013) **Role:** CO-I
- **Title:** “Studying Air Quality Dynamics using A Linear Genetic Programming Approach over Remotely Sensed Atmospheric Parameters: case study (Cairo, Egypt)” **Funding:** NSF Award for US-Egypt joint research agreement (Contract No 0922772) (2009-2011), **Role:** PI
- **Title:** “Air Quality Over Cairo: Remote Sensing and Ground Observations” **Funding:** USDA Award for US-Egypt joint research agreement (Contract No. 58-3148-7-044) (2006-2009), **Role:** CO-PI
- **Title:** “Climate Change and Impact Research: the Mediterranean Environment (CIRCE)” **Funding:** The Commission of the European Union FP6 (Contract No. 036961 GOCE) (2006-2010), **Role:** CO-PI
- **Title:** “Global and Environmental Change: Hazards and Regional impact” **Funding:** NASA Award (Contract No. NNX06AF30G) (2004-2008), **Role:** CO-I
- CO-I NASA, Congress awards Virginia Access Middle Atlantic Geospatial Information Consortium (Virginia Access – Magic)
- Served as a reviewer for many journals including IEEE Transactions of Geosciences and Remote Sensing, Remote Sensing of the Environment, Journal of Geophysical Research, Atmospheric Environment, Atmospheric Chemistry and Physics and Advances in Space Research and others.