

Joseph Essamuah-Quansah, Ph.D., MSE

(Other names: Joseph Emmanuel Quansah)

Assistant Professor of Agricultural & Biological Engineering

Geospatial and Climate Change Center

College of Agriculture, Environment & Nutrition Sciences

Department of Agricultural & Environmental Sciences

Phone: (334) 4444731 (C), (334)5391094 (H), (334)7278419 (O)

Email: jquansah@gmail.com, quansahj@mytu.tuskegee.edu

PUBLICATIONS - BOOKS & BOOK CHAPTERS

Gilbert L. Rochon, **Joseph E. Quansah**, Souleymane Fall, Bereket Araya, Larry L. Biehl, Thierno Thiam, Sohaib Ghani, Lova Rakotomalala, Hildred S. Rochon, Angel Torres Valcarcel, Bertin Hilaire Mbongo, Jinha Jung, Darion Grant, Wonkook Kim, Abdur Rahman M. Maud & Chetan Maringanti. "Remote Sensing, Public Health & Disaster Mitigation," in Nancy Hoalst-Pullen and Mark W. Patterson, Eds. Geospatial Technologies in Environment Management. Volume 3 of Geotechnologies and the Environment, Chapter 11, pp. 187 -209, NY: Springer, 2010.

http://link.springer.com/chapter/10.1007/978-90-481-9525-1_11

Gilbert L. Rochon, Dev Niyogi, Alok Chaturvedi, Krishna Madhavan, Raj Arangarasan, Larry Biehl, **Joseph E Quansah** and Souleymane Fall. "Adopting Multisensor Remote Sensing Datasets and Coupled Models for Disaster Management," Ch. 5, pp.75–100, in Shailesh Nayak & Sisi Zlatanova, Eds., Remote Sensing and GIS Technologies for Monitoring and Prediction of Disasters. Heidelberg: Springer, 2008. DOI 10.1007/978-3-540-79259-8_5 ISSN 1863-5520.

http://link.springer.com/chapter/10.1007%2F978-3-540-79259-8_5

Joseph E. Quansah, Bernard A. Engel Rochon, Gilbert L., Flanagan, Dennis C., and Chaubey, Indrajeet. Early Warning System for Water Quality Assessment within Agricultural Watersheds. Purdue University, Ph.D. Dissertation, 2007. <http://docs.lib.purdue.edu/dissertations/AAI3344181/>, <http://search.proquest.com/docview/304823567>

Gilbert L. Rochon, Dev Niyogi, Alok Chaturvedi, Rajarathinam Arangarasan, Krishna Madhavan, Larry Biehl, **Joseph E. Quansah**, Modeling, Visualization & Fusion Of Archival And Real-Time Multi-Sensor Satellite Data, Socio-Economic Data And In-Situ Data In Support Of Disaster Mitigation, Book Title: Remote Sensing & GIS Technologies for Monitoring and Prediction of Disasters", to be published by Springer Verlag and edited by Dr. Sisi Zlatanova (Delft University of Technology, Netherlands), 2007.

PUBLICATIONS - PEER REVIEWED PUBLICATIONS

Pauline Welikhe, **Joseph Essamuah–Quansah**, Kenneth Boote, Senthold Asseng, Gamal El Afandi, Souleymane Fall, Desmond Mortley and Ramble Ankumah. Impact of Climate Change on Corn Yields in Alabama. 2016 (Under review for publication PAWCJ)

Rebecca Gyawu, **Joseph E Quansah**, Souleyman Fall, and Peter N Gichuhi and Adelia Bovell-Benjamin. Community Food Environment Measures In the Alabama Black Belt: Implications for Cancer Risk Reduction. 2015. *Preventive Medicine Reports*. PMEDR Vol. 144 (2): 689-698 (2015) <http://www.sciencedirect.com/science/article/pii/S2211335515001175>

- Oluwatomiwa Adalumo, **Joseph E Quansah**, Souleymane Fall, Ramble Ankumah and Mudiayi Ngandu. "Assessment of Climate Variability Impact on Water Resources within the Alabama, Coosa and Tallapoosa River Basins", 2015 (Under review for publication in the Transactions of ASABE)
- Joseph E. Quansah**, Bernard A. Engel and Gilbert L. Rochon. 2010. "Early Warning Systems: A Review" *Journal of Terrestrial Observation (JTO)*. 2(2): 2010
<http://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1072&context=jto>
- J. E. Quansah**, B. A. Engel, I. Chaubey. 2008. "Tillage Practices Usage in Early Warning Prediction of Atrazine Pollution" *Transactions of ASABE* Vol. 51(4): 1311-1321 (2008)
<https://engineering.purdue.edu/ABE/People/Papers/bernard.a.engel.1/tillage.pdf>
- Joseph E. Quansah**, Gilbert L. Rochon, Kwamena K. Quagraine, Steve Amisah, Mucai Muchiri and Charles Ngugi. "Remote sensing applications for sustainable aquaculture in Africa" Institute for Electrical Engineering and Electronics (IEEE) International Geoscience and Remote Sensing Symposium (IGARSS) Barcelona, Spain, 23-28 July 2007. Proceedings No. 1-4244-1212-9/07: 1255–1259 (2007). <http://congress.cimne.upc.es/igarss07/frontal/ProgTodo.asp>
- Gilbert L. Rochon, Loring F. Nies, Chad T. Jafvert, Julie A. Stuart, Rabi H. Mohtar, **Joseph Quansah** and Akilah Martin. "Education in Sustainable Production in US Universities." *Clean Technologies and Environmental Policy*. Springer Verlag. Vol.8 (1):38–48 (2006)
<http://connection.ebscohost.com/c/articles/21254645/education-sustainable-production-us-universities>

PUBLICATIONS - CONFERENCE PRESENTATIONS AND PROCEEDINGS

- James Hunter, Dong Hee Kang, **Joseph Quansah** and Gary Wallace Using the Long-Term Hydrologic Impact Assessment Method as a tool for Stormwater Compliance, 13th Urban Watershed Management Symposium, World Environmental and Water Resources Congress. West Palm Beach, Florida, May 22-26, 2016.
- Pauline K. Welikhe, **Joseph E. Quansah**, Souleymane Fall and Gamal El Afandi. Soil Moisture Estimation and Crop Yield Projection Using Geospatial Approach. NGA GEOINT R&D STEM Outreach Symposium, Springfield, VA, 16 March, 2016
- Meghan Franklin, Souleymane Fall and **Joseph Essamuah-Quansah**. Analyzing the 2008 Flood Episode in Lawrence County, IL, Using Geospatial Techniques. NGA GEOINT R&D STEM Outreach Symposium, Springfield, VA, 16 March, 2016
- Joseph Essamuah-Quansah**, Enhancing Geospatial Research, Teaching and Outreach Capabilities at Tuskegee University. National Geospatial Intelligence Agency (NGA) Intelligence Community Academic Research Symposium, National Academy of Sciences, Keck Center, Washington, DC Sept. 15-17, 2015 <https://www.signup4.net/Upload/BOOZ13A/ICAC10E/ICARS%20Agenda.pdf>
- Gilbert L. Rochon, Chaker El Amrani, Tajjedine Rachidi, Tarek El Ghazawi, Gamal El Afandi, **Joseph E. Quansah**, Souleymane Fall, Gülay Altay and Mohammad A. Mohammad "Real-time access to orbital optical sensors for disaster early warning: a NATO science for peace sponsored partnership of universities in morocco, Turkey and the USA" *Journal of Physical Chemistry and Biophysics*, Vol 3 (5): 56 (2013). OMICS Publishing Group. ISSN 2161-0398. Scientific Track Abstracts
<http://dx.doi.org/10.4172/2161-0398.S1.002>
- Gilbert Rochon, Chaker El Amrani, Taje-eddine Rachidi, Gülay Altay, Tarek El Ghazawi, Gamal Salah El Afandi, Mohammed A. Mohammed, **Joseph Essamuah-Quansah**, Souleymane Fall and Chadia Affane-Aji. "The role of the NATO Science for Peace supported Mediterranean Dialogue Earth Observatory (MDEO), based in Morocco, in addressing Early Warning of Disasters, including those

associated with Meteorological and Climatic Change Events, and the anticipated correlates with Food Security and Public Health,” International Symposium on Weather and Climate Extremes, Food Security and Biodiversity (ISCEFS), Sponsored by George Mason University, Global Environment and National Resource Institute (<http://genri.gmu.edu/>), the UN World Meteorological Organization (WMO) and the UN Food and Agriculture Organization (FAO), Washington, DC, Oct. 20-24, 2014. Session 5-*Food, Water & Energy in Africa* <http://www.iscefs.org/>

Gilbert Rochon, Chaker El Amrani, Tajje-eddine Rachidi, Gülay Altay, Tarek El Ghazawi, Gamal Salah El Afandi, Mohammed A. Mohammed, **Joseph Essamuah-Quansah**, Souleymane Fall and Chadia Affane-Aji.. Real-Time Access to Orbital Optical Sensors for Disaster Early Warning: NATO Science for Peace Sponsored Partnership of Universities in Morocco, Turkey and the USA. The OMICS Group OPTICS 2013: International Conference and Exhibition on Lasers, Optics and Photonics. San Antonio, Texas. Oct. 07-09, 2013.

Gyawu R, Fall S, **Quansah J**, Bovell-Benjamin A. Assessment of the consumer food and physical activity environment in the Alabama Black Belt using GIS. Association of 1890 Research Directors, Inc. 1890 Research: Sowing seeds of change 1890 for the global community. Jacksonville, FL, US, April 7-10, 2013.

Joseph Essamuah-Quansah, Gamal El Afandi and Souleymane Fall. Geospatial and Climate Change Research at Tuskegee University. Presentation to Scientists and Researchers USDA –ARS Soil Sedimentation Laboratory in Oxford, Mississippi, February 17, 2012.

Hunter, J., Engel, B., and **Quansah, J.** Web-Based Low Impact Development Decision Support Tool for Watershed Planning. *Low Impact Development .Proceedings of ASCE.*, doi: 10.1061/41099(367) 43: 484-495(2010). <http://ascelibrary.org/doi/abs/10.1061/41099%28367%2943>

Gilbert Rochon, Dev. Niyogi, Souleymane Fall, **Joseph E. Quansah**, Larry Biehl, Bereket Araya, Chetan Maringanti, Angel Torres Valcarcel, Lova Rakotomalala, Hildred S. Rochon, Bertin Hilaire Mbongo & Thierno Thiam. Best Management Practices (BMPs) for Corporate, Academic and Governmental Transfer of Sustainable Technology to Developing Countries. *Clean Technologies & Environmental Policy*. Vol. 12, (1): February, 19–30. 2010. Special Issue on Best Management Practices for Technology Transfer to Industry. Invited submission. 4/28/09 ISSN 1618-954X(Print) 1618-95558 (online). Eds., Antonio Martins & Teresa Mata, Springer: DOI 10.1007/s10098-009-0218-3. <http://link.springer.com/article/10.1007%2Fs10098-009-0218-3>

Gilbert L. Rochon, Chaker El Amrani, Tajjeddine Rachidi, Dr. Gülay Altay - Boğaziçi Tarek El Ghazawi, Gamal El Afandi, **Joseph Essamuah-Quansah**, Souleymane Fall, Gülay Altay and Mohammad A. Mohammad Satellite Data Acquisition & Distribution Constraints: Case Studies From Africa And Alabama, USA Seaspace Corp. 20th International Remote Sensing Conference San Diego, California, Oct. 21 - 24, 2012

G. Rochon, C. El Amrani, T. Rachidi, G. Altay, T. El Ghazawi, O. Ersoy, **J. Quansah**, S. Fall, C. A. Aji, G. S. El Afandi 2012: Real-Time Remote Sensing for Disaster Life Cycle Management: The Mediterranean Dialogue Earth Observatory (MDEO). African Association of Remote Sensing of the Environment (AARSE), 9th International Conference, El Jadida, Morocco, Oct. 29-Nov. 02, 2012.

El Afandi, G., Fall, S., Egiebor, N., Rochon, G. and **Quansah, J.** 2012: Estimation of Meteorological Drought Index over West Africa. 8th International Scientific Conference, Al-Azhar University ,Environment, Development, and Bioinformatics, Cairo, Egypt, March 26-28, 2012

Joseph E. Quansah and Stephen Faulkner. “Modeling impacts of wetlands restoration on water quality and quantity within the Tensas River Basin. Morgan State University, May 5 2011.

- Joseph E. Quansah**, Nosa O. Egiebor, Souleymane Fall and Gilbert Rochon. “ Geospatial and Environmental Modeling Approach to Climate Change Adaptation in Africa” 6th Edition of 2iE’s Science Week, Ouagadougou Burkina Faso, April 4 - 8, 2011
<https://sustainabledevelopment.un.org/index.php?page=view&type=13&nr=215&menu=1634>
- Stephen Faulkner, Bogdan Chivoiu, **Joseph Quansah**, Wylie Barrow, J. Hardin Waddle, *et al.*” Integrated modeling frame work for forecasting ecosystem services. USGS Chesapeake Bay workshop, Rocky Gap Resort, Cumberland, MD. Nov. 17-18, 2010,
- Gilbert L. Rochon, Bertin Hilaire Mbongo, Larry Biehl, Jinha Jung, Souleymane Fall, **Joseph E. Quansah**, Bereket Araya, Abdur Rahman Maud, Wonkook Kim, Darion Grant and Thierno Thiam “Combining Heterogeneous Data for Improved Identification & Sustainable Mitigation of Infectious Disease Vector Habitat and for Assessment of Vulnerability to Vector-Borne, Water-Borne and Airborne Diseases.” US-Egypt Workshop on Space Technology and Geo-information for Sustainable Development, Cairo, Egypt 14-17 June, 2010.
- Gilbert L. Rochon, Larry Biehl, Wonkook Kim, Abdur Rahman M. Maud, Bertin Hilaire Mbongo, Jinha Jung, Souleymane Fall, **Joseph E. Quansah**, Thierno Thiam, Benjamin Weiss and Oluwatoba Omotilewa. (2010) "Earth Observing Satellites for Environmental Monitoring & Assessment: Availability, Acquisition, Analysis & Application of Archival and Real-Time Remotely Sensed Data." International Conference on Disaster Risks and Climate Change: Technological and Managerial Opportunities & Challenges for the Greater Mekong Sub-Region. Mae Fah Luang University, Natural Resources & Environmental Monitoring Center (NREMC) & School of IT, in collaboration with the Asian Disaster Preparedness Center (ADPC), MRC, DDPM, Water Resources Dept., National Park Dept., Purdue University and Fulbright-Thailand. Chiang Rai, Thailand, July 10-12, 2010
- James G. Hunter, Bernard A. Engel, and Joseph E. Quansah “Web-based Low Impact Development Decision Support Tool for Watershed Planning” ASCE - 2010 International Low Impact Development Conference: Redefining Water, San Francisco, California, April 11-14, 2010
<http://ascelibrary.org/doi/abs/10.1061/41099%28367%2943>
- Jong-Gun Kim, Bernie Engel, Indrajeet Chaubey, Youn Shik Park, **Joseph, E. Quansah**, Larry Theller, Wonseok Jang, Kyoung Jae Lim . Development of Web-based Load Duration Curve for Analysis of TMDL and Water Quality Characteristics. ASABE Annual International Meeting. *Paper no. 096176*, Reno, Nevada June 21 -24, 2009. <http://elibrary.asabe.org/techpapers.asp?confid=reno2009>
- Rochon, G.L.; Araya, B.; Biehl, L.L.; Grant, D.; Ersoy, O.; **Quansah, J.**; Altay, G.; Wahab, M.; El Afandi, G.S.; El-Ghazawi, T.; Mohamed, M.A; Shokr, M.; Sithole, H., "Acquisition, analysis and distribution of real-time multi-sensor satellite data, in a high performance computing environment, for disaster mitigation applications: Case studies from the NATO science for peace funded Kamal Ewida Earth Observatory in Egypt, the Electronic Geophysical Year (eGY)-Africa and the US Geological Survey supported AmericaView" IEEE Sensors Conference, Christchurch, New Zealand. Oct. 25-28, 2009 pp.1020-1025, IEEE ISSN: 1930-0395, DOI: 10.1109/ICSENS.2009.5398522
- Gilbert L. Rochon, **Joseph E. Quansah**, Larry Biehl, *et. al.*” Advances in High Performance Computing & in Satellite Remote Sensing to Support Sustainable Development & Disaster Mitigation in Africa”. Bowie State University, Bowie, Maryland. March 10, 2009
- J. E. Quansah**, B. A. Engel, M. Arabi , I. Chaubey and C Mariganti. “Modeling and Optimization Approach to Managing Critical Pollution Areas within Watersheds” USDA-CSREES National Water Conference, St. Louis, MO, Feb. 8-12, 2009.

- Chaubey, I. C. Mariganti, M. Arabi, B. Engel, and **J. Quansah** “Development of a multi-objective optimization tool for the selection and placement of BMPs for pesticide control” USDA-CSREES National Water Conference, St. Louis, MO, Feb. 8-12, 2009
- Bernie Engel, James Hunter and **Joseph Quansah** “Web-Based Decision Support and Planning Tools for Watershed Management” MN/MI/WI Lake Superior SWCDs Webinar conference, Jan. 28, 2009.
- Quansah, J. E.**, G. L. Rochon, L. Biehl, L. Rakotomalala, A. Martin, A. Torres Valcarcel, B. Araya, S. Fall, C. Mariganti, C. Robinson, E. S. Rochon, K. Frink, J.-P. Antelo, J. Smith-Hopkins and M. Flournoy IV. Early warning and mitigation systems for vector-borne and zoonotic diseases. 7th conference of the African Association of Remote Sensing of the Environment (AARSE), Accra, Ghana. Oct. 27-31.2008. <http://africanremotesensing.org/>
- Gilbert Rochon, Dev Niyogi, Souleymane Fall, **Joseph E. Quansah**, Larry Biehl, *et al.* “Bi-Directional Sustainable Technology Transfer from Universities to Industry and to Developing Countries: BMPs,” Clean Technologies & Environmental Policy. Special Issue on Best Management Practices for Technology Transfer to Industry. Invited submission. 2008.
- Gilbert L. Rochon, M. Magdy Abdel Wahab, Gad El-Qady, Gamal El Afandi, Ado Dan-Isa, Happy Sithole, Khomotso Kganyago, Souleymane Fall, **Joseph E. Quansah**, Bereket Araya. .Overcoming Bandwidth Limitations to Accelerate Applications of Remote Sensing & High Performance Computing for African Development: Contributions from Egypt, Nigeria and South Africa. Remote Sensing on the African Continent, IEEE IGARSS, Boston, MA, Hynes Convention Center, July 9, 2008
- Gilbert L. Rochon, Lefteri Tsoukalas, Chris Johannsen, **Joseph E. Quansah**, Larry Biehl, *et. al.* BioFuels: The Dialectics of Energy Security and Food Security, BioFuels Symposium, North Atlantic Treaty Organization (NATO) Pilot Study on Clean Technologies & Processes. Berlin, Germany, May 4-9, 2008.
- Gilbert L. Rochon, Okan K. Ersoy, Larry Biehl, **Joseph E. Quansah** and Oguz Gungor. Establishing a Shared Spatial Database of Archival and Remotely-Sensed Data for NATO Countries and Affiliates. NATO Science for Peace & Security, Pilot Study on Clean Technologies Processes Annual Meeting. Porto, Portugal, May 5-9, 2007.
- Gilbert Rochon, Butare Rukundo, **Joseph Quansah** and Mohamed A. Mohamed. “Remote Sensing for Sustainable Public Health & Infectious Disease Mitigation in Africa, UN Global Earth Observing System of Systems (GEOSS) Workshop. Ouagadougou, Burkina Faso, Sept. 16-18, 2007
- G. L Rochon, Mohamed A. Mohamed, Dev Niyogi, Melba M. Crawford, J. Paul Robinson, Souleymane Fall, **Joseph E. Quansah**, Larry Biehl, Jie Shan, Carol Xiaohui Song, *et. al.*. Multidisciplinary Research Enabled by Real-time and Archival Remote Sensing and High Performance Computing to Support Environmental Sustainability and Disaster Mitigation. Al Ahzar University, Departments of Astronomy and Meteorology, Cairo, Egypt, Nov. 4, 2006
- G. L Rochon, Mohamed A. Mohamed, Dev Niyogi, Melba M. Crawford, J. Paul Robinson, Souleymane Fall, **Joseph E. Quansah**, Larry Biehl, Jie Shan, Carol Xiaohui Song, , *et. al.*. Integration of Real-Time and Archival Remote Sensing with High Performance Computing & Dynamic Modeling to Support Disaster Mitigation. African Association for Remote Sensing of Environment (AARSE), Cairo, Egypt, Oct. 30 - Nov. 2, 2006
- GL Rochon, Mohamed A. Mohamed, Dev Niyogi, Melba M. Crawford, J. Paul Robinson, Souleymane Fall, **Joseph E. Quansah**, Larry Biehl, Jie Shan, Carol Xiaohui Song, Derrick S. Kearney, Lan Zhao and Amy Neuenschwander. *In Situ* Monitoring, Satellite Remote Sensing, Proximal Sensing & High

Performance Computing to Facilitate Sustainability and Disaster Preparedness." Cairo University, Aerospace Studies Department, Cairo, Egypt, Nov. 2, 2006.

Gilbert L. Rochon, Dev Niyogi, Krishna Madhavan, Rajarathinam Arangarasan, Alok Chaturvedi, Maruti Ram Ponaganti, UC Mohanty, Larry Biehl, **Joseph E. Quansah**, *et. al.* "Toward Intelligent and Sustainable Archiving of Geo-Spatial Data," International Society for Photogrammetry & Remote Sensing (ISPRS) International Symposium on Geospatial Databases for Sustainable Development. Goa, India. Sept. 27-30, 2006,

Dev Niyogi, Gilbert L. Rochon, Krishna Madhavan, Rajarathinam Arangarasan, UC Mohanty, Alok Chaturvedi, Maruti Ram Ponaganti, Larry Biehl, **Joseph E. Quansah**, *et. al.* "Modeling, Visualization and Fusion of Archival Data to support Disaster Mitigation." Geo-Informatics for Disaster Management (Gi4DM 2). Goa, India. Sept. 25-26, 2006.

Recognition in other Publications

Mercy A. A. Derkyi, Ph.D. "Fighting over forest; Interactive governance of conflicts over forest and tree resources in Ghana's high forest zone" African Studies Centre, Leiden, Ph.D. Dissertation, 2012.

<http://www.ascleiden.nl/> <http://www.ascleiden.nl/publications/fighting-over-forest-interactive-governance-conflicts-over-forest-and-tree-resources>

R. M. Records, M. Arabi, S. R. Fassnacht, W. G. Duffy, M. Ahmadi, and K. C. Hegewisch. Climate change and wetland loss impacts on a western river's water quality. *Hydrol. Earth Syst. Sci.*, 18, 4509–4527, 2014. <http://www.hydrol-earth-syst-sci.net/18/4509/2014/hess-18-4509-2014.pdf>