**Song Liang, Ph.D.**

Department of Environmental and Global Health College of Public Health and Health Professions Emerging Pathogens Institute

107 EPI

Gainesville, FL 32610

Phone: 352-273-9203, email: songliang@ufl.edu

# PROFESSIONAL EXPERTISE AND RESEARCH INTERESTS

* Schistosomiasis, soil-transmitted helminthiasis, & diarrhea
* Environmental epidemiology, risk assessment, & dynamic modeling
* Environmental burden of diseases
* Environmental & climate changes
* Water, sanitation, & hygiene (WASH)
* One health/ecosystem approach, disease surveillance & control

# EDUCATION

Ph.D. University of California, Berkeley (2003). Environmental Health Sciences

Minors – Epidemiology and Biostatistics

Thesis: *A Spatio-temporal Modeling of Schistosomiasis Transmission Dynamics and Control*

M.S. University of California, Berkeley (1999). Environmental Health Sciences

M.S. Southwest China Normal University (1992). Zoology

* 1. Southwest China Normal University (1989). Biology

# PROFESSIONAL EXPERIENCE

12/2012 – present Visiting Professor, Institute of Microbiology and Epidemiology, State Key Laboratory of Pathogens and Biosecurity, Academy of Military Medicine, China

7/2012 – present Associate Professor, Department of Environmental and Global Health, College of Public Health Professions, and Emerging Pathogens Institute, University of Florida

5/2007 – 6/2012 Assistant Professor, Environmental Sciences Graduate Program, The Ohio State University

10/2006 – 6/2012 Assistant Professor, College of Public Health, The Ohio State University

1/2006 – 9/2006 Lecturer, School of Public Health, University of California, Berkeley

7/2004 – 6/2007 Visiting Professor, Center for Public Health Application of Remote Sensing/Geographical Information Systems, Institute of Remote Sensing, Chinese Academy of Science

7/2004 – 6/2007 Guest Assistant Professor, Sichuan Center for Disease Control and Prevention, Chengdu, China

7/2004 – 9/2006 Assistant Researcher, School of Public Health, University of California at Berkeley

12/2003 – 6/2004 Postdoctoral Fellow, School of Public Health, University of California at Berkeley

# HONOR & AWARDS

2017 – 2020 University of Florida Term Professorship Award 10/2010 The 2nd Place Award of Science and Technology Progress,

Sichuan Provincial Government, Sichuan, P.R. China

9/2002 – 5/2003 Water G. & Julia Parker Scholarship, University of California at Berkeley

1/2003 Travel Award, Graduate Division, University of California at Berkeley. International Symposium on Health Sciences Simulation, Orlando, Florida, USA

10/2001 – 9/2002 Russel M. Grossman Award for Doctoral Student Research, School of Public Health, University of California at Berkeley

10/2000 – 9/2001 Marie Louise Ellert Scholarship, School of Public Health, University of California at Berkeley

12/1998 The 2nd Place Award of National Science and Technology Progress, Ministry of Science and Technology, P.R. China

12/1997 The 3rd Place Award of Science and Technology Progress, Sichuan Provincial Government, Sichuan, P.R. China

# PROFESSIONAL AFFILIATION

* + - American Public Health Association
		- American Society of Tropical Medicine and Hygiene
		- International Society of Infectious Diseases

# COURSES DEVELOPED/TAUGHT

Principles of Environmental Health

Current Topics Global Environmental Health Public Health in Developing Countries

Modeling Epidemiology and Control of Infectious Diseases in Humans and Animals Water and Human Health Risk

Introduction to Foodborne Illness

Environmental and Occupational Health in Agricultural Settings

# MAJOR SERVICES

* + - * 5/2015 – present, Study Section Committee (ad hoc), Global Health Section, US CDC
			* 7/2015 – present, PHHP Research Committee, University of Florida
			* 7/2013 – 6/2015, PHHP Curriculum Committee, University of Florida
			* 3/2013 – present, Faculty Advisory Committee, Florida Climate Institute
			* 1/2013 – present, Advisory Committee, Florida Department of Health
			* 8/2013 – present, Associate Editor, *PLoS NTDs*
			* 1/2011 – present, Associate Editor, *BMC Public Health*
			* 8/2011 – 7/2015, Advisory Committee Member, *Public health and tropical Disease Control Program* for Jiangmen City*,* Guangdong Province, China
			* 6/2011 – 5/2015, Advisory Committee Member, *Innovative Strategies for Sustainable Control of Asian Schistosomiasis and Other Helminth Zoonoses through Socio-Ecosystem-Based Interventions in Six Asian Countries(Cambodia, China, Laos, Thailand, The Philippines, Vietnam) ,* Funded by IDRC, Canada
			* 3/2011 – 6/2012 , Governance Committee of New Undergraduate Program on Environmental Public Health at the Ohio State University
			* 8/2011 – 6/2012, PHPID (Public Health Preparedness for Infectious Diseases at the Ohio State University) Strategic Priority Committee
			* 9/2009 – 5/2010 – Steering Committee of Internationalization of Undergraduate Program by Office of International Affairs, the Ohio State University
			* 10/2008 – 10/2010, PHPID International Congress Committee, The Ohio State University
			* The ASPH/CDC Allan Rosenfield Global Health Fellowship Review Committee (2007)
			* 10/2006 – 6/2012, Graduate Faculty Representative on Doctoral Candidacy Exams, The Ohio State University Graduate School
			* 6/2007, Charter member, Ohio State University Targeted Investment in Excellence (TIE) program in Public Health Preparedness (PHP) for Infectious Diseases.
			* Spring 2007, Staff Award Committee, College of Public Health, The Ohio State University
			* 1/2007 – 6/2012 , Chair, Graduate Student Admission Committee at Division of Environmental Health Sciences, College of Public Health, The Ohio State University
			* Reviewer of manuscripts for the following journals
				+ *New England Journal of Medicine*
				+ *BMJ Open*
				+ *Scientific Reports (Nature)*
				+ *BMC Public Health*
				+ *Acta Tropica*
				+ *Journal of Microbial Ecology*
				+ *Journal of the American Water Resources Association*
				+ *Journal of Environmental Science and Technology*
				+ *American Journal of Tropical Medicine and Hygiene*
				+ *Transactions of the Royal Society of Tropical Medicine and Hygiene*
				+ *PLoS Medicine*
				+ *PLoS Neglected Tropical Diseases*
				+ *PLoS One*
				+ *Bulletin of the World Health Organization*
				+ *Tropical Medicine and International Health*
				+ *Environmental Engineering Science*
				+ *International Journal of Parasitology*
				+ *Parasitology International*
				+ *Journal of Biological Systems*
				+ *Journal of Parasitoses and Infectious Disease*
				+ *Geographical Information Sciences*
				+ *GeoJournal*

# FUNDED RESEARCH

**Active:**

* + - Livestock movements and disease epidemiology in the Chad Basin: modeling risks for animals and humans (Co-PI; 10/2010 – 4/2018; NSF/EEID Program; PD: Garabed, OSU)
		- Florida Integrated Food Safety Center of Excellence (Co-PI, 6/2013-5/2017, CDC, PI: Morris)
		- WSC-Category 3: Analytical methods for estimating the joint climatological- social drivers of water quality and supply in contrasting tropical zones (Sub- award PI, 9/2014 – 8/2019, NSF)
		- Population density, neighborhood-level sanitation access, and health in urban Maputo (Sub-award PI, 1/1/2016 – 3/31/2017, USAID, Prime Institution LSHTM)
		- Spatial-temporal data integration methods for infectious disease surveillance. (Sub-award PI, 2/1/2017 – 3/31/2022, NIH/NIAID R01, Prime PD: Remais, UCB)

# Pending

* + - Identifying biomarkers for susceptibility to *S. japonicum* infection in humans (PI, 10/2017 – 9/2019, NIH/NIAID R21)
		- Data integration via disease transmission models: assessing local control options (Sub-award PI, 7/2017 – 6/2019, NIH/NIAID R21)
		- Water quality resilience in small coastal community (Co-PI, 5/2017 – 4/2020, National Academies of Sciences, PI: Frank, UFL)
		- Sea level rise and vulnerability of manufactured homes and residents in Gulf region of Florida (Co-PI, 5/2017 – 4/2020)

# Completed:

* + - Ensuring safe drinking water in Lake Erie: quantifying extreme weather impacts on cyanobacteria and disinfection byproducts (Sub-award PI; 6/1/2012 – 5/31/2015; EPA STAR Program; PI: Lee)
		- Swine influenza virus transmission in confined animal feeding operations, China (Co-PI, 7/2014-6/2019, NIH/NIAID, PI: Gray)
		- Minimizing transmission of AMR from wildlife to livestock: a research, prevention, and outreach strategies (Subaward PI; 9/1/2011 – 8/30/2015; USDA/NIFSI Program; PI: LeJeune)
		- Spatio-temporal pattern of cholangiocarcinoma and risk factors in Thailand (PI; 3/1/2012 – 2/28/2014, American Society of Cancer)
		- The Socio-Environmental Determinants of Schistosomiasis Re-emergence (Sub-award PI; 4/2007- 3/2012; NIH/NIAID; Total funded amount:

$1,672,060; Total sub-award: $ 260,862)

* + - The global impact of terrestrial surface waters on the distribution of water- related infectious diseases (PI: Liang; 10/2008-9/2011, CWC/PHPID, The Ohio State University; total funded amount: 100,000)
		- Pilot study of livestock movements and disease epidemiology in the Chad basin : modeling risks for animals and humans (PI : Garabed ; 9/2009 – 8/2011, TIE, The Ohio State University ; Total funded amount : $100,000 ; Co-PI)
		- Livestock movements and disease transmission in the Chad Basin : modeling risks for animals and humans (PI: Moritz ; 10/2009 – 09/2011, IPR, The Ohio State University; Total funded amount: $ 41,000)
		- Pilot Testing: Epidemiological surveillance and investigation of illness reported by neighbors of biosolids land application and other soil amendments (PI: Liang; 1/2009 – 12/2010; Water Environment Research Foundation via Franklin County Board of Health; Total funded amount:

$129,000)

* + - The influence of environmental change on schistosomiasis transmission in the Poyang Lake region (PI: Liang; 12/2007 – 11/2009, TIE, The Ohio State University: Total funded amount: $100,000)
		- Local strategies for schistosomiasis control (PI: Spear; 6/2002 – 5/2007, NIH/NIAID, Researcher and Project Manager)

# LIST OF BOOKS, PUBLISHED PAPERS, AND MANUSCRIPTS IN PRESS & UNDER REVIEW

## *Peer-reviewed manuscripts in press/under review*

1. Spear, R., Liang, S. (2017). Rural development, transmission, and control of schistosomiasis – a dynamic modeling perspective. (under review)
2. Teklemariam, D., Legesse, M., Degarege, A., Liang, S., Erko, B. (2017). *Schistosoma mansoni* and other intestinal parasitic infections in schoolchildren and vervet monkeys in Lake Ziway area, Ethiopia. *Infectious Diseases of Poverty* (under review)
3. Alemayehu, B., Tomass, Z., Wadilo, F., Leja, D., Liang, S., Erko, B. (2017). Epidemiology of intestinal helminthiasis among schoolchildren with emphasis on *Schistoma mansoni* infection in Wolaita Zone, southern Ethiopia. *BMC Public Health* (under review)
4. Rivero, M.R., De Angelo, C., Nunez, P., Salas, M.M., Motta, C.E.; Chiarerra, A., Salomon, D., Liang, S. (2017). Multilevel determinants and spatial risk modeling of intestinal parasite infections in a subtropical areas of Latin America. *PLoS NTDs* (under reviw)
5. Jiang, B.G., Liang, S., Peng, Z.R., Morgan, L., Chen, Q., Wang, T.B., Remais, J. (2017). Transport and public health in China: the road to a heathy future. *The Lancet* (revision back)
6. Ngwa, M.s, Liang, S., Blackburn, J., Mouhaman, A., Mevoula, O., Morris, J.G., Jr. (2016). Cultural factors behind cholera transmission in the Far North Region of Cameroon: a field experience and implications for operational level planning of interventions. *Tropical Medicine and International Health (under review)*
7. Khan, S.U., Yang, Y., Haider, N., Chowdhury, S., Sharker, M.A., Blackburn, J.S., Yamage, M., Gurley, E., Luby, S.P., Liang, S. (2017). How different is the geographical distribution of the high and low pathogenic avian influenza viruses? A comparative risk distribution study from Bangladesh. (*Under review)*
8. Tian, D., Tian, J., Xie, G., Tseng, S., Shum, C.K., Lee, J., Liang, S.(2017). Spatiotemporal variability and environmental factors of harmful algal blooms (HABs) over western Lake Erie, USA. *PLoS One (revision back)*

## *Peer-reviewed publications*

1. Zhang, Fs., Hu, C.L., Shum, C.K., Liang, S., Lee, J.Y. (2017). Satellite remote sensing of drinking water intakes in Lake Erie for cyanobacteria population using two MODIS-based indicators as a potential tool for toxin tracking. *Frontiers of Marine Science*
2. Ngwa, Ms., Liang, S., Kracalik, I., Morris, L., Blackburn, J., Mbam. L., Baonga Ba Pouth, S.F., Teboh, A., Yang, Y., Sugimoto, J., Morris, J.G., Jr. (2016). Cholera in Cameroon, 2000-2012: spatial and temporal analysis at the operational (health district) and sub climate levels. PLoS Negl Trop Dis 10(11): e0005105. doi:10.1371/journal.pntd.0005105
3. Ngwa, M.CS., Liang, S., Mbam, L.M., Mouhaman, A., Teboh, A., Brekmo, K., Mevoula, O., Morris, J.G. Jr. (2016). Cholera public health surveillance in the

Republic Cameroon – opportunities and challenge. *Pan African Medical Journal*. 2016; 24:222 doi:10.11604/pamj.2016.24.222.8045

1. Ngwa, M.Cs., Masalla, T., Esemu, S. Foche, Francis, Akaochere, J.F. Cella, E., Liang, S., Salemi, M., Morris, J. G., Jr., Ali, A., Ndip, L. (2016) Genetic studies of *Vibio cholerae* in South West Cameroon – A phylodynamic analysis of isolates from the 2010-2011 epidemic. *PLoS Currents: Outbreaks,* DOI: [10.1371/currents.outbreaks.13b4e5e36a5c0831a1663fbdb5713fe9](https://dx.doi.org/10.1371/currents.outbreaks.13b4e5e36a5c0831a1663fbdb5713fe9)
2. Zhou, Y.B., **Liang, S.**, Jiang, Q. W. (2016). The Three Gorges Dam: Does it facilitate or delay progress towards the elimination of schistosomiasis in China? *Infectious Disease of Poverty* ;5(1):63. doi: 10.1186/s40249-016-0156-3.
3. Zhou, Y., Chen, Y., Liang, S., Chen, G.X., He, Z., Cai, B., Yihuo, W., He, Z. G., Jiang, Q.W. (2016) Multi-host model and threshold of intermediate host *Oncomelania* snail density for eliminating schistosomiasis in China. *Scientific Reports,* doi: 10.1038/srep31089.
4. Wang, X.Y., He, J., Yang, K., **Liang, S**. (2016). Applications of spatial technology in schistosomiasis control programs. *Advances in Parasitology, 92: 1- 24* <http://dx.doi.org/10.1016/bs.apar.2016.02.020>
5. Li XL, Yang Y, Sun Y, Chen WJ, Sun RX, Liu K, Ma MJ, **Liang S**, Yao HW, Gray GC, Fang LQ, Cao WC (2015). [Risk Distribution of Human Infections with](http://www.ncbi.nlm.nih.gov/pubmed/26691585) [Avian Influenza H7N9 and H5N1 virus in China.](http://www.ncbi.nlm.nih.gov/pubmed/26691585) *Sci Rep.,* 22;5:18610. doi: 10.1038/srep18610 PMID: 26691585; PMCID: PMC4686887.
6. Li X, Wang D, Li B, Zhou H, **Liang S**, Ke C, Deng X, Kan B, Morris JG Jr, Cao W (201[5). Characterization of environmental Vibrio cholerae serogroups O1 and](http://www.ncbi.nlm.nih.gov/pubmed/26674584) [O139 in the Pearl River Estuary, China.](http://www.ncbi.nlm.nih.gov/pubmed/26674584) *Can J Microbiol*., 18:1-9
7. Khan SU, Anderson BD, Heil GL, **Liang S**, Gray GC (2015). [A Systematic](http://www.ncbi.nlm.nih.gov/pubmed/25712969) [Review and Meta-Analysis of the Seroprevalence of Influenza A(H9N2) Infection](http://www.ncbi.nlm.nih.gov/pubmed/25712969) [Among Humans.](http://www.ncbi.nlm.nih.gov/pubmed/25712969) *J Infect Dis*., 212(4):562-9. doi: 10.1093/infdis/jiv109. Epub 2015 Feb 23. Review. PMID: 25712969; PMCID: PMC4598807.
8. Fang LQ, Goeijenbier M, Zuo SQ, Wang LP, **Liang S**, Klein SL, Li XL, Liu K, Liang L, Gong P, Glass GE, van Gorp E, Richardus JH, Ma JQ, Cao WC, de Vlas SJ (2015). [The association between hantavirus infection and selenium deficiency](http://www.ncbi.nlm.nih.gov/pubmed/25609306) [in mainland China.](http://www.ncbi.nlm.nih.gov/pubmed/25609306) *Viruses*, 7(1):333-51. doi: 10.3390/v7010333. PMID: 25609306; PMCID: PMC4306842.
9. **Liang, S.** (2015) Towards a new era of human health and civilization – planetary health. *Science Bulletin, 60(30):2804-2805*
10. Zhou, Y.B., Wang, Q.X., **Liang, S.**, Gong, Y.H., Yang, M.X., Chen, Y., Nie, S.J., Nan, L., Yang, A.H., Liao, Q., Yang, Y., Song, X.X., Jiang, Q. W (2015). Geographical variations in risk factors associated with HIV infection among drug users in a prefecture in Southwest China. *Infectious Diseases of Poverty, 4:38* DOI 10.1186/s40249-015-0073-x
11. Fang, L.Q., Liu, K., Li, X.L., **Liang, S**., Yang, Y., Yao, H.W., Sun, R.X., Sun, Y., Chen, W.J., Zuo, S.Q., Ma, M.J., Wang, J.L., Jiang, J.F., Gray, G., Yang, F., Cao, W. (2015). Emerging tick-borne diseases in China – an increasing public health threat. *Lancet Infectious Diseases, 15(12):1467-79*
12. Lee, J., Tseng, K.H., Zhang, F., Lee, C.H., Marion, J., **Liang, S.**, Shum, C.K. (2015). From Satellite to genes: an integrative approach for timely monitoring of

harmful cyanobacteria in Lake Beach Water. *Journal of Environmental Pollution and Human Health, 3(3): 70-79*

1. Brown J, Cumming O, Bartram J, Cairncross S, Ensink J, Holcomb D, Knee J, Kolsky P, Liang K, **Liang S**, Nala R, Norman G, Rheingans R, Stewart J, Zavale O, Zuin V, Schmidt WP (2015). [A controlled, before-and-after trial of an urban](http://www.ncbi.nlm.nih.gov/pubmed/26088809) [sanitation intervention to reduce enteric infections in children: research protocol](http://www.ncbi.nlm.nih.gov/pubmed/26088809) [for the Maputo Sanitation (MapSan) study, Mozambique.](http://www.ncbi.nlm.nih.gov/pubmed/26088809) *BMJ Open.* 18;5(6):e008215. doi: 10.1136/bmjopen-2015-008215. PMID: 26088809; PMCID: PMC4480002.
2. Yang, Y., Zhang, Y., Fang, L., Halloran, M.E., Ma, M., **Liang, S**., Kenah, E., Britton, T., Chen, E., Hu, J., Tang, F., Cao, W., Feng, Z., Longini Jr., I.M. (2015). Household transmissibility of avian influenza A (H7N9) virus, China, February to May2013 and October 2013 to March 2014. *Eurosurveillance, 20(10): 6-11*
3. Zhang, F., Lee, J.Y., **Liang, S**., Shum, C.K. (2015). Cyanobacteria blooms and non-alcoholic liver disease: evidence from a county level ecological study in the United State. *Environmental Health, 14:41* DOI: 10.1186/s12940-015-0026-7
4. Wu, J.Y., Zhou, Y.B., Chen, Y., **Liang, S**., Li, L.H., Zheng, S.B., Zhu, S.P., Ren G.H., Song, X.X., Jiang, Q. W. (2015). The Three Gorges Dam: Impact of water level on the density of schistosome-transmitting snail *Oncomelania hupensis* in Dongting Lake Area, China. *PLoS NTDs 9(6)*:e0003882. doi:10.1371/journal.pntd.0003882
5. Ngassam, R.I.Kg., Kouninki, H., Monglo, M., Djekine, E., **Liang, S.**, Tchuem Tchuente, L.A. (2014). Identification and mapping of some potential transmission foci of shcistosomiasis in Maroua, Far North Region, Cameroon. *International Journal of Innovation and Applied Studies, 7(1): 65-77*
6. Zheng, N.C., Liu, Y.H., Liang, B.N., Xu, J.F., Fang, Y.Y., Yang, Y., **Liang, S**. (2014). Current prevalence of *Clonorchis sinensis* infections in Jiangmen, Guangdong Province. *Chinese Journal of Parasitology and Parasitic Diseases, 6: 441-445*
7. Mouhaman, Ag., Xiao, N., Taiwe, K.D., **Liang, S.** (2014): Cholera incidence in the Far North Region of Cameroon: a geographical perspective. *African Journal of Social Sciences, 5(3):141-157*
8. **Liang, S.**, Yang, C., Zhong, B., Guo, J., Li, H., Carlton, E.J., Matthew C.F., Remais,

J.V. (2014). Surveillance systems for neglected tropical diseases: global lessons from China’s evolving schistosomiasis reporting systems, 1949 – 2014. *Emerging Themes in Epidemiology, 11(9): 1-14*

1. Hodges, M., Belle, J., Carlton, E., **Liang, *S.***, Li, H., Luo. W., Freeman, M., Liu, Y., Gao Y., Hess, J., Remais, J. (2014). Delays reducing waterborne and water- related infectious diseases in China under climate change. *Nature Climate Change, 4:1109-1115*
2. Liu K, Cui N, Fang LQ, Wang BJ, Lu QB, Peng W, Li H, Wang LY, **Liang S**, Wang HY, Zhang YY, Zhuang L, Yang H, Gray GC, de Vlas SJ, Liu W, Cao WC (2014). [Epidemiologic features and environmental risk factors of severe fever](http://www.ncbi.nlm.nih.gov/pubmed/24810269) [with thrombocytopenia syndrome, Xinyang, China.](http://www.ncbi.nlm.nih.gov/pubmed/24810269) *PLoS Negl Trop Dis*, 8(5):e2820. doi: 10.1371/journal.pntd.0002820. eCollection 2014 May. PubMed PMID: 24810269; PubMed Central PMCID: PMC4014392.
3. Zhou, Y., **Liang, S**., Wang, Q. X., Gong, Y.H., Nie, S.J., Nan, L., Yang, A. H., Liao, Q., Song, X.X., Jiang, Q.Q. (2014). The geographical distribution patterns of HIV-, HCV-, and Co-infections among drug users in a national methadone maintenance treatment program in Southwest China. *BMC Infectious Disease, 14(134): 1:10*
4. Convertino, M., **Liang, S.** (2014). Probabilistic supply chain risk model for food safety. *Planet@Risk (Special Issue on One Health)* , 2(3):1-5
5. Tseng, K.Hp., **Liang, S.**, Ibaraki, M., Lee, H., Shum, C.K. (2014). Study of the variation of schistosomiasis risk in Lake Poyang in the People’s Republic of China using multiple space-borne sensors for monitoring and modeling. *Geospatial Health,* 8(2): 1:12
6. Djaoudas, M., Njine, T. **Liang, S.,** Ebang Menye, D., Gake, B., Zebaze Togouet S.H., Nola M. (2014). Bacteriological quality of well waters in Garoua, North Cameroon. *Water Quality, Exposure, and Health,* 3(2):1-18 (DOI: 10.1007/s12403-014-0120-z)
7. Yang, Kp., Xu, J., Zhang, J., Li, W., He J., **Liang, S.**, Bergquist, R. (2014). Establishing and applying a schistosomiasis early warning index (SEWI) in the Lower Yangtze River Region of Jiangsu Province, China. *PLoS One,* 9(4):1-9 (e94012)
8. Li, Y.J., Li., X. **Liang, S.**, Fang, L., Cao, W.C. (2013). Epidemiological features and risk factors associated with the spatial and temporal distribution of human brucellosis in China. *BMC Infectious Diseases*, 13:547
9. Zhou, Y. B., **Liang,S.,** Chen, G.X., Jiang, Q. W. (2013) Spatio-temporal variations of *Schistosoma japonicum* distribution after an integrated national control strategy: A cohort in a marshland area of China. *BMC Public Health*, 2013, 13:297 [PMID: 23556428]
10. Cheung, M.Yg., **Liang, S.**, Lee, J. (2013)Toxin-producing cyanobacteria in freshwater: a review of the problems, impact on drinking water safety, and efforts for protecting public health. *Journal of Microbiology*, 51(1): 1-10
11. Moore, J. L., **Liang, S.**, Akullian, A., Remais,J. (2012). Cautioning the use of degree-day models for climate change projections: predicting the future distribution of parasite hosts in the presence of parametric uncertainty. *Ecological Applications,* 22(8): 2237-2247
12. Zhou, Y.B., **Liang, S.,** Jiang, Q.W. (2012). Factors impacting on progress towards elimination of transmission of schistosomiasis japonica in China. *Parasites & Vectors,* 5(275):1-7 (PMCID: PMC3519747)
13. Qian, M.B., Chen, Y.D., **Liang, S**., Yang, G.J., Zhou, X.N. (2012). The global epidemiology of clonorchiasis and its relation with cholangiocarcinoma. *Infectious Diseases of Poverty,* 1(4): 1-11
14. Carlton E, **Liang S**, McDowell J, Li H, Luo W, Remais J (2012). Regional disparities in the burden of disease attributable to unsafe water and sanitation in China. *Bulletin of World Health Organization*, 90(8):578-87
15. Gao, H.Wg., Wang, L.P., **Liang, S**., Liu, Y.X., Tong, S.L., Wang, J.J., Li, Y.P., Wang, X.F., Yang, H., Ma, J.Q., Fang, L.Q., Cao, W.C. (2012). Change in rainfall drives malaria re-emergence in Anui Province, China. *PLoS One*, 7(8): e43686
16. Yang, Kp., Lejeune J, Alsdorf. D, Lu, B., Shum CK, **Liang S** (2012). Global distribution of outbreaks of water-associated infectious diseases. *PLoS NTDs;* 6(2):e1483. (PMCID:PMC3279334)
17. **Liang, S.,** Lou, Y. (2012) On the dependence of population size upon random dispersal rate. *Discrete and Continuous Dynamical Systems* (*Series B*)*,* 17(8): 2771-2788
18. Fang LQ, Wang LP, de Vlas SJ, **Liang S**, Tong SL, Li YL, et al. (2012) Distribution and Risk Factors of 2009 Pandemic Influenza A (H1N1) in Mainland China. *Am J Epidemiol*. 175(9):890-7.
19. Gong P, **Liang S**, Carlton EJ, Jiang Q, Wu J, Wang L, Remais, J. (2012) Urbanisation and health in China. *The Lancet*. 379(9818):843-52.
20. Spear RC, Seto EY, Carlton EJ, **Liang S**, Remais JV, Zhong B, Qiu, D. (2011) The challenge of effective surveillance in moving from low transmission to elimination of schistosomiasis in China. *Int J Parasitol*. 41(12):1243-7
21. Sithithaworn, P., Andrews, R.H., Van De, N., Wongsarroj, T., Siunon, M, Odermatt, P., Nawa, Y., **Liang, S.**, Brindley, P., Sripa, B. (2011). The current status of opisthorchiasis and clonorchiasis in the Mekong Basin. *Parasitology International, Aug 25 [PMID: 21893213]*
22. Zhou, Y.Bp., **Liang, S.,** Chen, G.X., Rea, C., Cui, D.Y., He, Z.Gui., Zhang, Z.J., Wei., J.G., Zhao, G.M. , Jiang, Q.W. (2011). An integrated strategy for transmission control of *Schistosoma japonicum* in a marshland area of China: findings from a five-year longitudinal survey and mathematical modeling. *American Journal of Tropical Medicine and Hygiene*, 85(1): 83-88 (PMCID: PMC3122349)
23. Seto EY, Remais JV, Carlton EJ, Wang S, Liang S, Brindley PJ, Qiu D, Spear RC, Wang LD, Wang TP, Chen HG, Dong XQ, Wang LY, Hao Y, Bergquist R, Zhou XN (2011)[. Toward sustainable and comprehensive control of](http://www.ncbi.nlm.nih.gov/pubmed/22039563) [schistosomiasis in China: lessons from Sichuan.](http://www.ncbi.nlm.nih.gov/pubmed/22039563) PLoS Negl Trop Dis., 5(10):e1372. doi: 10.1371/journal.pntd.0001372. PMID: 22039563; PMCID: PMC3201916.
24. Qian, M., Zhou, X.N., Fang, Y.Y., **Liang, S.**, Chen, Y. (2011). Strengthening research work on clonorchiasis in China. *Chinese Journal of Parasitology and Parasitic Diseases,* 29(3): 211 – 214
25. Spear, R., **Liang, S**.(2011) Mathematical modeling as an aid in developing strategy for sustainable interruption of *S. japonicum* transmission in the hilly and mountainous regions of China. *Journal of Schistosomiasis Control*, 23(3):231-236
26. Zhong, B., Wu, Z. Chen, L., **Liang, S.** Dong, X., Qiu, D. Strengthening schistosomiasis control achievements in hilly regions of China. 2011, *Journal of Schistosomiasis Control*, 23(1):10-13
27. Fang, L.Q., Wang , X.J., **Liang, S.**, Li, Y.L., Song, S.X., Zhang, W.Y., Qian, Q., Li, Y.P., Wei, L,, Wang, Z.Q., Yang, H., Cao, W.C. (2010). Sptatio-temporal trend and climatic factors of hemorrhagic fever with renal syndrome epidemic in Shandong Province, China. *PLoS NTDs*, 4(8):e789
28. Zhang, J., Zhu, T., Mauzerall, D., **Liang, S.**, Ezatti, M., Remais, J. (2010). Environmental Health in China: progress towards clear air and safe water. *The Lancet*, 375(9720):1110-1119
29. Fang, L.Q., Zhao, W.J., de Vlas, S.J., Zhang, W.Y., **Liang, S.**, Looman, C.W.N., Yan, L., Wang, L.P., Ma, J.Q., Feng D., Yang H., Cao, W.C. (2009). Spatiotemporal dynamics of hemorrhagic fever with renal syndrome in Beijing, a newly- established endemic region. *Emerging Infectious Disease,* 15(12):2043-5
30. Fang, L.Q., de Vlas, S.J., Feng, D., **Liang, S.**, Xu, Y.F., Zhou J.P., Richardus, J.H., Cao, W.C. (2009). Geographical spread of SARS in mainland China. *Tropical Medicine & International Health,* 14( Suppl. I): 1-7
31. Liu, Y.X., Feng, D., Suo, J.J., Xing, Y.B., Liu, G., Liyu, L.H., Xiao, H.J., Jia, N., Gao, Y., Yang, H., Zuo, S.Q., Zhang, P.H., Zhao, Z.T., Min., J.S., Peng, P.T., Ma, S.B., **Liang, S**., Cao, W.C. (2009). Clinical characteristics of the autumn-winter type scrub typhus cases in south of Shandong Province, Northern China. *BMC Infectious Disease, 9:82*
32. Zhang, W., Wang, L., Fang, L., Ma, J., Xu, Y., Jiang, J., Wang, J., **Liang, S.**, Yang, H., Cao W. (2008). Spatial analysis of malaria in Anhui Province, China. *Malaria Journal* 7(1): 206
33. Tian, L.W., Bi, Y., Ho, S.C., Liu, W.J., **Liang, S**., Goggins, W. B., Chan, E.Y.Y., Zhou, S., Sung, J.J.Y. (2008) One-year delayed effect of fog on malaria transmission: a time-series analysis in the rain forest areas of Mengla County, south-west China. *Malaria Journal*, 7(110):1-9
34. Fang, L.Q.p, de Vlas, S.J., **Liang, S.**e, Looman, C. W., Gong, P., Xu. B., Yan, L., Yang, H., Richardus. J.H., Cao, W.C. (2008) Environmental factors contributing to the spread of H5N1 avian influenza in mainland China. *PLoS One*, 5(3):e2268
35. Zhong, B., **Liang, S**., Xu, F.S., Wu, Z.S., Yang, C.H., Chen, L., Zhang, Y., Meng, X., Qiu, D.C., Spear, R.C. (2008). Risk factors associated with transmission of schistosomiasis in mountainous regions and implications for control. *Chinese Journal of Preventive Medicine,* 42(8):565-568
36. **Liang, S**., Spear, R.C. (2008). Model-based insights into multi-host transmission and control of schistosomiasis. *PLoS Medicine*, 5(1):e23
37. Remais, J., **Liang, S.**, Spear, R.C. (2008). Coupling hydrologic and infectious disease modeling to explore regional differences in schistosomiasis transmission in southwestern China. *Environmental Science & Technology*, 42(7):2643-2649
38. Eisenberg, J., Desai, M., Levy, K., Bates, S, **Liang, S**., Naumoff, K., Scott, J. (2007). Environmental determinants of infectious disease: A framework for tracking causal links and guiding public health research. *Environmental Health Perspectives,* 115(8): 1216-1223
39. Fang, L.Q., de Vlas, S.J., Richardus, J.H., **Liang, S.**, Gong, P., Cao, W.C. (2007). Spatiotmporal distribution and environmental factors of highly pathogenic avian influenza H5N1 in mainland China. Tropical Medicine & International Health, 12(1): 160-161
40. Seto, E., Lee, E., **Liang., S.**, Zhong, B. (2007).Individual and village-level study of water contact exposure patterns and *Schistosoma japonicum* infection in mountainous rural China. *Tropical Medicine and International Health*, 12(10): 1199-1209
41. **Liang, S.**, Seto, E., Remais, J., Zhong, B., Yang, C., Hubbard, A., Davis, G., Gu, X., Qiu, D., Spear, R.C. (2007) Environmental effects on parasitic disease transmission exemplified by schistosomiasis in Western China. *Proc Natl Acad Sci USA.* **104** (17):7110-7115
42. Spear, R.C., Seto, E., Remais, J., Carlton, E.J., Davis, G., Qiu, D., Zhou, X., **Liang, S**. (2006) Fighting waterborne infectious diseases. *Science*, 314, 1081-3.
43. Fang, L., Zhong, S., **Liang, S.**, de Vlas, S.J., Feng, D., Han, X., Yan, L., Yang, H., Zhao, W., Cao, C., Gong, P., Richardus, J.H., Xue, Y., Cao, W. (2006) Studies on applications of remote sensing and geographical information system in surveillance and prediction of highly pathogenic avian influenza. *Asia-Pacific Space Outlook,* 9:17-22
44. Fang, Lg., Yan, L., **Liang, S**., de Vlas, S.J., Feng, D., Han, X., Zhao, W., Xu, B., Bian, L., Yang, H., Gong, P., Richardus, J.H., & Cao, W. (2006) Spatial analysis of hemorrhagic fever with renal syndrome in China. *BMC Infectious Disease*, 6, 77~
45. Zhong, B., **Liang, S.**, Zhang, Y., Lai, Y.H., Chen, L., Yin, H.Z., Zhao, Y.M., Lu, J.Q., & Qiu, D.C. (2006) Water exposure modes and times of different populations in mountainous schistosomiasis endemic areas near Qionghai Lake. *Chinese Journal of Preventive Medicine*, 40, 239-243.
46. Gong, P., Xu, B., & **Liang, S**. (2006) Remote sensing and geographic information systems in the spatial temporal dynamics modeling of infectious diseases. *Science in China Series C- Life Sciences*, 49, 573-582.
47. **Liang, S**., Yang, C.H., Zhong, B., Qiu. D.C.(2006). Re-emerging schistosomiasis in mountainous and hilly region, Sichuan, China. *Bulletin of World Health Organization* 84(2):139-44.
48. Xu, B., Gong, P., Seto, E., **Liang, S**, Yang, C., Wen, S., Gu, X., Spear, R.C. (2006). A spatial-temporal model for assessing the effects of inter-village connectivity in schistosomiasis transmission. *Annals of Associations of American Geographers,* 96(1) 31-46
49. **Liang, S**., Spear, R.C., Seto, E., Hubbard, A., Qiu, D.C. (2005). A multi-group model of *Schistosoma japonicum* transmission dynamics and control: model calibration and control prediction. *Tropical Medicine and International Health* 10 (3); 273-287.
50. Xu, B., Gong, P., Biging, G., **Liang, S.**, Seto, E. and Spear, R.C. (2004). Snail Density Prediction for Schistosomiasis Control Using IKONOS and ASTER Images, *Photo. Engr. and Remote Sensing*, 70(11):1285-1294
51. Xu, B., P. Gong, **S. Liang**, E. Seto, B. Spear R. C. (2004). Snail density estimation for schistosomiasis control by integrating field survey and multiscale satellite images, *Geographic Information Sciences*, 9(1-2): 97-100
52. Bodnar, A., Castorina, R., Desai, M., Duramad, P., Fischer, S., Klepeis, N., **Liang, S**., Mehta, S., Naumoff, K., Noth, E. M., Schei, M., Tian, L., Vork, K. L., and Smith,

K. R. (2004). Lessons learned from the Skeptical Environmentalist: an environmental health perspective. *International Journal of Hygiene and Environmental Health* **207**, 57-67.

1. Spear, R. C., Seto, E., **Liang, S**., Birkner, M., Hubbard, A., Qiu, D. C., Yang, C. H., Zhong, B., Xu, F. S., Gu, X. G., and Davis, G. M. (2004). Factors Influencing the

Transmission of *Schistosoma japonicum* in the Mountains of Sichuan Province. *Am. J. Trop. Med. Hyg.* **70**, 48-56.

1. Spear, R, Hubbard, A., **Liang, S.**, Seto, E. (2002). Disease Transmission Models for Public Health Decision Making: Toward an Approach for Designing Intervention Strategies for Schistosomiasis japonica. *Environmental Health Perspectives* **110**:907-915.
2. Seto, E., Xu, B., **Liang, S.**, Gong, P., Wu, W.P., Davis, G., Qiu, D.C., Gu, X.G., Spear,

R. (2002). The use of remote sensing for predictive modeling of schistosomiasis in China. *Photogrammetric Engineering and Remote Sensing* **68**:167-174.

1. **Liang, S.**, Maszle, D., Spear, R.C. (2002). A quantitative framework for a multi- group model of Schistosomiasis japonicum transmission dynamics and control in Sichuan, China. *Acta Tropica* **82**:263-277.
2. Hubbard, A., **Liang, S.**, Maszle, D., Qiu, D.C., Gu, X.G., Spear, R.C. (2002) Estimating the distribution of worm burden and egg excretion of schistosoma japonicum by risk group in Sichuan Province, China. *Parasitology*, **125**:221- 231.
3. Seto, E., **Liang, S.**, Qiu, D., Gu, X., Spear, R.C. (2001) A protocol for geographically randomized snail surveys in schistosomiasis fieldwork using the global positioning system. *Am J Trop Med Hyg* **64**:98-9.
4. Wen, S., Xu, F., **Liang, S.** (1998) Investigation of environmental changes in the Three Gorges area: the potential impact on occurrence of schistosomiasis. *Journal of Practical Parasitic Diseases* **2**:25-27
5. Gu, X., Xu, F., **Liang, S.**, Qian, X., Zhao, W., Wen, S., Qiu, D., Liu, C. (1997). Effectiveness of stratified anti-measures for controlling schistosomiasis in Zone I, II, III of Xichang Study Area. *Journal of Schistosomiasis Control*, 9(6);338-341
6. **Liang, S.**, Gu, X., Zhao, W.X., Li, X. (1996) Highly risky area and strategies for controlling schistosomiasis in mountainous regions, Sichuan. *Journal of Practical Parasitic Diseases* **4**:54-58.
7. Xu, F., Qian, X., **Liang, S**., Zhao, W., Gu, X. (1996). The effect of schistosomiasis control in Xichang Study Area between 1987 – 1995. Journal of Practical Parasitic Disease, 4(3): 129-130
8. **Liang, S.**, Zhao, W.X., He, C.S. (1995) A report of *Schistosoma sinensia* in natural waer systems of Danling County, Sichuan, China. *Sichuan Journal of Zoology* **14**:45.
9. Luo, P., Luo, L., **Liang, S**. (1994). The detection of DNA finger prints with M13 phase of DNA probe in the mouse. *Acta Southwest Nationality University (Natural Science Edition)* **20**:289-292.