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CURRICULUM VITAE

December, 2017

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Education

University of Minnesota, Minneapolis, Minnesota: Ph.D., Biometry/Biomathematics- 1977

University of Florida, Gainesville, Florida: M.S., Statistics/Operations Research- 1973

University of Florida, Gainesville, Florida: B.S., Engineering/Operations Research- 1971

Research and/or Professional Experience

- 7/11- present Full Professor, Department of Biostatistics, Colleges of Public Health and Health Professions, and Medicine, University of Florida, Gainesville, FL
- 7/11- present Director, Center for Statistics and Quantitative Infectious Diseases (CSQUID), Emerging Pathogens Institute, University of Florida, Gainesville, FL
- 1/06- 6/11 Full Member, Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, WA.;
Full Professor of Biostatistics, Department of Biostatistics, School of Public Health, University of Washington, Seattle, WA.
- 1/06 – 6/11 Director, Mathematical Modeling for HIV/STD Research, Center for AIDS Research, University of Washington, Seattle, WA.
- 7/06 – 7/07 Ross Prentice Professor of Biostatistics, Department of Biostatistics, School of Public Health and Community Medicine, University of Washington, Seattle, WA.
- 9/88- 12/05 Full Professor of Biostatistics (9/92- 12/05), Associate Professor (9/88- 8/92), Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, Georgia

1/93- 7/93	Visiting Fellow, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, Cambridge, England
8/84- 8/88	Assistant Professor of Biometry, Department of Statistics and Biometry, Emory University, Atlanta, Georgia
9/82- 7/84	Assistant Research Scientist in Epidemiology, Department of Epidemiology, University of Michigan, Ann Arbor, Michigan
9/82- 6/83	Visiting Assistant Professor of Statistics, Department of Statistics, University of Michigan, Ann Arbor, Michigan
1/80- 06/82	Postdoctoral Research Scholar in Biometry and Epidemiology, Department of Epidemiology, University of Michigan, Ann Arbor, Michigan
8/77- 12/79	Assistant Professor of Statistics, Department of Information and Systems, Universidad del Valle, Cali, Colombia, South America
8/77- 12/79	Postdoctoral Associate, International Center for Medical Research and Training, Cali, Colombia, South America

Principal Areas of Interest

Biostatistics, stochastic processes, infectious disease epidemiology

Publications in Peer Review Literature

1. Hodgson, T.J., K.E. Kilpatrick, and I.M. Longini: An integer quadratic programming approach to scheduling multispecialty clinics," *AIIE Transactions*, **9**, 69-74 (1977).
2. Longini, I.M., Ackerman, E. and Elveback, L.R.: An optimization model for influenza A epidemics. *Mathematical Biosciences* **38**,141-157 (1978).
3. Longini, I.M.: A chain binomial model of endemicity. *Mathematical Biosciences* **50**, 85-93 (1980).
4. Longini, I.M. and Koopman, J.S.: Household and community transmission parameters from final distributions of infections in households. *Biometrics* **38**, 115-126 (1982).
5. Longini, I.M., Koopman, J., Monto, A.S. and Fox, J.P.: Estimating household and community transmission parameters for influenza. *American Journal of Epidemiology* **115**, 736-751 (1982).
6. Longini, I.M., Koopman, J. and Monto, A.S.: Estimation procedures for transmission parameters from influenza epidemics: Use of serological data. *Voprosy Virusologii*, **No. 2**, 176-181 (1983). (In Russian.)
7. Longini, I.M.: Models of epidemics and endemicity in genetically variable host populations. *Journal of Mathematical Biology* **17**, 289-304 (1983).
8. Monto, A.S., Koopman, J.S., Longini, I.M. and Isaacson, R.E.: The Tecumseh Study. XII. Enteric agents in the community. *Journal of Infectious Diseases* **148**, 284-291 (1983).

9. Longini, I.M., Monto, A.S. and Koopman, J.S.: Statistical procedures for estimating the community probability of illness in family studies: Rhinovirus and influenza. *International Journal of Epidemiology* **13**, 99-106 (1984).
10. Longini, I.M., Higgins, M.W., Hinton, P.C., Moll, P.P. and Keller, J.R.: Environmental and genetic sources of aggregation of blood pressure in Tecumseh, Michigan. *American Journal of Epidemiology* **120**, 131-144 (1984).
11. Higgins, M.W. and Longini, I.M.: Discussion: The Tecumseh Community Health Study, in *Genetic Epidemiology of Coronary Heart Disease* (eds. D.C. Rao, R.C. Elston, L.H. Kuller, M. Feinleib, C. Carter, R. Havlik) Alan Liss, NY, 43-45 (1984).
12. Longini, I.M., Seaholm, S.K., Ackerman, E., Koopman, J.S. and Monto, A.S.: Simulation studies of influenza epidemics: Assessment of parameter estimation and sensitivity. *International Journal of Epidemiology* **13**, 496-501 (1984).
13. Longini, I.M., Higgins, M.W., Hinton, P.C., Moll, P.P. and Keller, J.R.: Genetic and environmental sources of aggregation of body mass in Tecumseh, Michigan. *Human Biology* **56**, 733-757 (1984).
14. Longini, I.M.: Models of the interaction of host genotypes and infectious disease. *Lecture Notes in Biomathematics* **57** (ed. V. Capasso). Springer-Verlag, New York, 158-163 (1985).
15. Monto, A.S., Koopman, J.S. and Longini, I.M.: The Tecumseh study of illness. XII. Influenza infection and disease, 1976-1981. *American Journal of Epidemiology* **121**, 811-822 (1985).
16. Rvachev, L.A. and Longini, I.M.: A mathematical model for the global spread of influenza. *Mathematical Biosciences*, 75:3 22 (1985).
17. Longini, I.M.: Modeling influenza epidemics, in *Options for the Control of Influenza, UCLA Symposia on Molecular and Cellular Biology, New Series, Volume 36* (eds. A.P. Kendal and P.A. Patriarca) Alan Liss, NY, 89-105 (1986).
18. Longini, I.M., Fine P.E.M. and Thacker, S.B.: Predicting the global spread of new infectious agents. *American Journal of Epidemiology* **123**, 383-391 (1986).
19. Longini, I.M.: The discrete-time general epidemic model: a synthesis. *Mathematical Biosciences* **81**, 19-41 (1986).
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21. Gomez, H., Koopman, J.S., Addy, C.L., Zarate, M.L., Vaca, M.A., Longini, I.M., *et al.*: Dengue epidemics on the pacific coast of Mexico. *International Journal of Epidemiology* **17**, 178-186 (1988).
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Manuscripts Submitted or in Preparation (partial list)

1. Gomez-Dantes H, Rojas, Manrique-Saide P, Che-Mendoza A, Feldstein L, Halloran ME, Longini IM, Pavia N, Barrera M: Design methodology for evaluating dengue control interventions: Baseline field studies in Yucatan, Mexico. (In preparation).
2. Dean NE, Halloran ME, Longini IM: Per protocol and intention to treat in vaccine efficacy trials in outbreak settings. (In preparation).
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6. Hladish TJ, Pearson CAB, Rojas DP, Gomez-Dantes H, Halloran ME, Vazquez-Prokopec GM: Effectiveness of indoor residual spraying for reducing dengue transmission. *Science Translational Medicine* (Submitted).

Books

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Longini, I.M.: *Stochastic Processes for Biostatistics* (in process).

Monographs, Book Chapters, Commentaries, Non-peer-review Articles

Longini, I.M. and Cuervo de Mesa, A.S.: "Lectures on Applied Stochastic Processes", Cali: Universidad del Valle (1978) pp. 175. (In Spanish.)

Longini, I.M.: "Notes on Time Series Analysis", Cali: Universidad del Valle (1979) pp. 47. (In Spanish and English.)

Longini, I.M. and Addy, C.: Report to the Global Epidemic Intelligence Service: "Analysis of Dengue Transmission in Mexico" (1987) pp. 56.

Longini, I.M.: Chain Binomial Models in *The Encyclopedia of Biostatistics*, **Volume 1**, (eds. P. Armitage and T. Colton), Wiley, NY, 593- 597 (1998).

Longini, I.M.: Invited commentary on C. P. Farrington, M. N. Kanaan and H. J. Gay: "Estimation of the basic reproductive number for infectious diseases from age-stratified serological survey data." *Appl. Statist.* **50**: 288-289 (2001).

Longini, I.M. (one of 28 signatories) : Ebola vaccine trial in Guinea. *Lancet* (letter) (2014) <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2815%2960656-0/fulltext>

Longini IM, Egger M, Dean NE, Edmunds WJ, Henao-Restrepo AM: Ebola vaccination – Authors' reply. *Lancet* **386**: 2480 (2015).

Perspective: Eliminating Cholera Transmission in Haiti. *New England Journal of Medicine*. DOI: 10.1056/NEJMp1614104 (2016).

Book Reviews

Spatial Aspects of Influenza Epidemics. Cliff, A.D., Hagget, R. and Ord, J.K., Pion Limited, London, 1986: in *Mathematical Biosciences* **89**, 237-239 (1988).

AIDS Epidemiology: A Quantitative Approach. Brookmeyer, R. and Gail, M.H., Oxford University Press, New York, 1994: in *Science* **265**, 1602-1603 (1994).

Service

Member of the Data Safety Monitoring Board for an open label post licensure trial to evaluate the safety and immunogenicity of indigenously manufactured killed bivalent (O1 and O139) whole cell oral cholera vaccine (Shanchol™), International Vaccine Institute.

Awards and Honors

CDC Statistical Science Award "Best Theoretical Paper" published in 1994. Satten, G.A. and Longini, I.M.: Estimation of incidence of HIV infection using cross-sectional marker surveys. *Biometrics* **50**, 675-688 (1994).

CDC James H. Nakano Citation "for an outstanding scientific paper published in 1994." Mastro, T.D., Satten, G.A., Nopkesorn, T., Sangkharomya, S. and Longini, I.M.: Probability of female-to-male transmission of HIV-1 in Thailand. *Lancet* **343**, 204-207 (1994).

Howard M. Temin Award in Epidemiology for Scientific Excellence in the Fight Against HIV/AIDS (1995) for the article: Jacquez, J.A., Koopman, J.S., Simon, C.P. and Longini, I.M.: The role of primary infection in the epidemics of HIV infection in gay cohorts. *Journal of AIDS* **7**, 1169-1184 (1994).

Elected Fellow of the American Statistical Association, 1995

CDC Statistical Science Award "Best Applied Paper" published in 1996. Satten, G.A. and Longini, I.M.: "Markov chains with measurement error: estimating the "true" course of a marker of HIV disease progression (with discussion)". *Applied Statistics* **45**, 275-309 (1996).

Elected Fellow of the American Association for the Advancement of Science (AAAS), 2012

International Society for Vaccines: "Paper of the Year 2015." Henao-Restrepo, A-M, Longini IM, Egger M, Dean NE *et al.*: Efficacy of a recombinant live VSV-vectored vaccine expressing Ebola surface glycoprotein: Interim results from the Guinea ring vaccination cluster-randomized trial. *The Lancet*, **38**, 857–866 (2015). <http://www.isv-online.org/menu-annual-congress/previos-papers/2015-paper-of-the-months/171-paper-of-the-year-2015>

Science Magazine, one of the top 10 "Breakthrough of the Year" for 2015. Guinea Ebola ring vaccination trail: <http://www.sciencemag.org/news/2015/12/and-science-s-breakthrough-year>

Aspen Institute Italia Award for scientific research and collaboration between Italy and the United States, 2016. For outstanding research on Ebola transmission and control.

Named UF Research Foundation Professor for excellence in research, 2017-2020.

Ph. D. Students and Post-Docs

Chaired Ph.D. Committee for 21 successful candidates

Chaired M.S. Committee for 3 successful masters candidates

Advised 14 Post Docs

Current Funding

R37, NIH: *Methods for Evaluating Vaccine Efficacy*, Investigator.

U54 (Center), NIH: *Modeling of Infectious Disease Agent Study Centers for Excellence Center for Statistics and Quantitative Infectious Diseases*, Investigator and Lead of Modeling and Spatial Statistics Project.

R01, NIH: *Quantifying the Balance Between Vaccine-induced T Cell Protection and Pathology*, Investigator.

R01, NIH: *Regression, Phylogenetics, and Study Design in Infectious Disease Epidemiology*, Investigator.

R01, NIH: *Dynamics of Influenza Transmission in Nicaraguan Households*. Investigator

R21 NIH: *Spatiotemporal Modeling for Surveillance Data of Multiple Pathogens*, Investigator.

World Health Organization Contract: *Statistical Analysis of Emerging Pathogens*, Principal Investigator.