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# JORGE A. ALFARO-MURILLO

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Associate Research Scientist  
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## EDUCATION

- PhD in Mathematics, Purdue University 12/2013
- MSc in Statistics, Purdue University 12/2013
- BSc in Mathematics, Universidad de Costa Rica 02/2008
- BSc in Economics, Universidad de Costa Rica 02/2006
- German Abitur, Humboldt Schule, Costa Rica 12/2001

## PUBLICATIONS

- J. A. Alfaro-Murillo, Zhilan Feng, John W. Glasser. Analysis of an epidemiological model structured by time-since-last-infection. *Journal of Differential Equations*, in press, 2019.
- B. Y. Lee, J. A. Alfaro-Murillo, A. S. Parpia, L. Asti, P. T. Wedlock, P. J. Hotez, A. P. Galvani. The Potential Economic Burden of Zika in the Continental United States. *PLoS Neglected Tropical Diseases*, 11(4): e0005531, 2017.
- J. A. Alfaro-Murillo, A. S. Parpia, M. C. Fitzpatrick, J. A. Tamagnan J. Medlock, M. L. Ndeffo-Mbah, D. Fish, M. L. Ávila-Agüero R. Marín, A. I. Ko, and A. P. Galvani. A Cost-Effectiveness Tool for Informing Policies on Zika Virus Control. *PLoS Neglected Tropical Diseases*, 10(5):e0004743, 2016.
- J. A. Alfaro-Murillo, J. P. Townsend, and A. P. Galvani. Optimizing age of cytomegalovirus screening and vaccination to avert congenital disease in the US. *Vaccine*, 34(2):225-229, 2016.
- J. A. Lewnard, M. L. Ndeffo Mbah, J. A. Alfaro-Murillo, F. L. Altice, L. Bawo, T. G. Nyenswah, and A. P. Galvani. Dynamics and control of Ebola virus transmission in Montserrado, Liberia: a mathematical modelling analysis. *The Lancet Infectious Diseases*, 14(12):1189-1195, 2014.
- J. A. Alfaro-Murillo, S. Towers, and Z. Feng. A deterministic model for influenza infection with multiple strains and antigenic drift. *Journal of Biological Dynamics*, 7(1):199-211, 2013.
- Z. Feng, J. A. Alfaro-Murillo, D. L. DeAngelis, J. Schmidt, M. Barga, Y. Zheng, M. H. B. A. Tamrin, M. Olson, T. Glaser, K. Kielland, F. S. Chapin III, and J. Bryant. Plant toxins and trophic cascades alter fire regime and succession on a boreal forest landscape. *Ecological Modelling*, 244:79-92, 2012.

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## PRESENTATIONS

- 6th International Conference on Mathematical Biology. Beijing, China. 07/2018
- VII Congress of Pediatrics of Mesoamerica and the Caribbean. San Jose, Costa Rica. 06/2017
- II Regional Meeting for the Evaluation of the Vaccination Impact in Pneumococcal Disease Epidemiology. Montevideo Uruguay. 09/2016
- Symposium “Vaccines: a vital decision”. National Children’s Hospital, Costa Rica. 04/2016
- Launch of Regional Group for the Study of Pneumococcal Disease. ICIC, Costa Rica. 11/2014
- The Society for Mathematical Biology Annual Meeting and Conference. Arizona State University. 06/2013
- The Fourth Conference on Computational and Mathematical Population Dynamics. North University of China, Taiyuan, China. Conference Session Organizer. 05/2013
- SIAM Conference on Applications of Dynamical Systems. Snowbird, Utah. 05/2013
- Everything Disperses to Miami. The University of Miami. 12/2012
- The Society for Mathematical Biology Annual Meeting and Conference. NIMBioS, University of Tennessee. Session Chair. 07/2012
- The Third International Conference On Math Modeling And Analysis. Trinity University. 10/2011
- Workshop for Young Researchers in Mathematical Biology. MBI, Ohio State University. 08/2011
- MCSMC Summer 2011 Mini-Workshop III: Bifurcations and Optimal Control in Epidemiology. Arizona State University. 06/2011
- MCSMC Summer 2011 Mini-Workshop I: Heterogeneity and Ecologies. Arizona State University. 05/2011
- Computational Science And Engineering Student Conference-SIAM. Purdue University. 04/2011
- Mathematics in Emerging Infectious Disease Management. CIC-UNAM, Mexico. Session Chair. 01/2011
- Mathematical Modeling in Population Biology and Epidemiology-10th Annual Red Raider Mini-Symposium. Texas Tech University. 10/2010

## TEACHING EXPERIENCE

- Universidad de Costa Rica 2005-2008  
Course Coordinator for Mathematics for Economics I. Course Instructor for Mathematics for Economics I, Mathematical Principles for Pure Mathematics, Multivariate Calculus.
- Purdue University 2008-2013  
Course Instructor for Calculus For The Life Sciences I. Recitation Instructor for Plane Analytic Geometry And Calculus I, Multivariate Calculus, Linear Algebra And Differential Equations.
- Arizona State University 2010  
Teaching Assistant for the MTBI/SUMS Summer Program. Held office hours and graded homeworks in different topics of mathematical biology.