

## Gerardo Chowell

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CONTACT INFORMATION	School of Public Health Georgia State University  1 Park Place, Suite 662 Office 640B Atlanta, GA 30303	<i>Tel:</i> 404-413-9322 <i>Fax:</i> 404-413-1489 <i>E-mail:</i> gchowell@gsu.edu
EDUCATION	<b>PhD in Biometry (2005)</b> <ul style="list-style-type: none"><li>• <b>Cornell University</b>, Ithaca, New York USA</li><li>• Biological Statistics and Computational Biology</li><li>• <i>Conferral: January 19, 2005</i></li></ul> <b>B.S. Engineering (2001)</b> <ul style="list-style-type: none"><li>• <b>Universidad de Colima</b>, Colima, Mexico</li><li>• Engineering in Telematics</li><li>• <i>August 1997 - June 2001</i></li></ul>	
PROFESSIONAL EXPERIENCE APPOINTMENTS	<b>Professor &amp; Chair, Department of Population Health Sciences</b> present <ul style="list-style-type: none"><li>• Second Century Initiative Scholar (2CI)</li><li>• School of Public Health</li><li>• Georgia State University, Atlanta, Georgia</li></ul> <b>Professor, Epidemiology &amp; Biostatistics</b> <ul style="list-style-type: none"><li>• Second Century Initiative Scholar (2CI)</li><li>• School of Public Health</li><li>• Georgia State University, Atlanta, Georgia</li></ul> <b>Associate Professor, Mathematical Epidemiology</b> <ul style="list-style-type: none"><li>• Second Century Initiative Scholar (2CI)</li><li>• School of Public Health</li><li>• Georgia State University, Atlanta, Georgia</li></ul> <b>Adjunct Professor</b> <ul style="list-style-type: none"><li>• Simon A. Levin MCMSC</li><li>• School of Human Evolution and Social Change</li><li>• Arizona State University, Tempe</li></ul> <b>Director, Center for Global Health</b> <ul style="list-style-type: none"><li>• School of Human Evolution and Social Change</li><li>• Arizona State University, Tempe, Arizona</li></ul> <b>Director of Graduate Studies, Applied Mathematics in the Life and Social Sciences</b> <ul style="list-style-type: none"><li>• PhD Program in Applied Mathematics in the Life and Social Sciences</li><li>• School of Human Evolution and Social Change</li><li>• Arizona State University, Tempe</li></ul> <b>Executive board member, Sigma Xi ASU Chapter, The Scientific Research Society</b> <ul style="list-style-type: none"><li>• ASU Chapter of Sigma Xi</li><li>• Arizona State University, Tempe</li></ul> <b>Approach Head, Global Health</b> <ul style="list-style-type: none"><li>• PhD Program in Global Health</li><li>• School of Human Evolution and Social Change</li></ul>	08/2018 –    04/2017 – 07/2018   01/2015 – 03/2017   01/2015 – Present  08/2013 – 07/2014  05/2012 – 07/2013  08/2012 – 05/2014  08/2011 – 05/2012

- Arizona State University, Tempe
- Associate Professor of Mathematical Epidemiology** 08/2011 – 12/2014
  - Applied Mathematics for the Life and Social Sciences
  - School of Human Evolution and Social Change
  - Arizona State University, Tempe
- Assistant Professor** 08/2007 – 07/2011
  - Applied Mathematics for the Life and Social Sciences
  - School of Human Evolution and Social Change
  - Arizona State University, Tempe
- Research Associate** 05/2008 – present
  - Fogarty International Center, National Institutes of Health, USA
  - Division of International Epidemiology and Population Studies
- Research Professor** 12/9/2009 – present
  - Ciencias Médicas D
  - Instituto Nacional de Salud Pública
  - Cuernavaca, Morelos, Mexico
- External affiliate member** 08/2007 – 12/2009
  - Theoretical Division, Los Alamos National Laboratory
  - Los Alamos, New Mexico USA
- Affiliated Faculty** 10/2007 – 12/2014
  - School of Social and Family Dynamics
  - Arizona State University, Tempe
- Postdoctoral Fellow** 03/2007 – 08/2007
  - Center for Nonlinear Studies, Mathematical Modeling and Analysis Group
  - Los Alamos National Laboratory
  - Los Alamos, New Mexico USA
- Director Funded Postdoctoral Fellow** 03/2005 – 03/2007
  - Center for Nonlinear Studies, Mathematical Modeling and Analysis Group
  - Los Alamos National Laboratory
  - Los Alamos, New Mexico USA
- Graduate Research Assistant** 06/2004 – 08/2004
  - Mathematical and Theoretical Biology Institute
  - Arizona State University, Los Alamos National Laboratory
  - Los Alamos, New Mexico USA
- Staff Research Employee** 01/2003 – 01/2004
  - Center for Nonlinear Studies
  - Los Alamos National Laboratory
  - Los Alamos, New Mexico USA
- Graduate Research Assistant** 01/2003 – 01/2004
  - Theoretical Division (T-7 Group)
  - Los Alamos National Laboratory
  - Los Alamos, New Mexico USA
- Research Assistant** 06/2000 – 08/2000
  - Mathematical and Theoretical Biology Institute
  - Cornell University
  - Ithaca, New York USA
- HONORS AND AWARDS**
- Forgaty International Center Merit Award** 12/10/2010
  - Multinational Influenza Seasonal Mortality Study Team
  - Outstanding Achievement in seasonal and pandemic influenza studies

- Bethesda, MD

**Dr. L.E. Nicolle Award**

08/2009

- Founding Editor-in-Chief of The Canadian Journal of Infectious Diseases & Medical Microbiology
- article: A. B. Gumel, M. Nuno, **G. Chowell**. Mathematical assessment of Canada's pandemic influenza preparedness plan. **Can. J. Inf. Dis. & Med. Microb.** 19, 185-192 (2008).

**Faculty Achievement Award in Defining Edge Research: Young Investigator**

4/23/2010

- Office of the President
- Arizona State university, Tempe

**Directors Funded Postdoctoral Fellowship (2005-2006)**

01/2005

- Los Alamos National Laboratory
- Los Alamos, New Mexico USA

**Presidential Young Scientist Award and Medal, 2003, for scientists 25 years or younger**

11/26/2003

- Office of the President of Mexico
- Distrito Federal, Mexico

EDITORIAL  
BOARDS

1. BMC Medicine (Nov 2012 - present)
2. BMC Infectious Diseases (Nov 2012 - present)
3. PLoS ONE (May 2013 - present)
4. Scientific Reports (March 2015 - present)
5. Mathematical Biosciences and Engineering (April 2015 - present)
6. Biomed Research International (Mar 2013 - Dec 2017)
7. SIAM Undergraduate Research Online (Jan 2010 - Dec 2015)
8. Infectious Disease Modelling (Jan 2016 - present)

SECTION EDITOR

1. Epidemics Journal - Epidemics Now Section Editor (Jan 2016 - present)

CITATION AND  
OTHER  
QUANTITATIVE  
IMPACT METRICS

1. Google Scholar Citations (as of December 2017)  $\approx$  8000 total citations
2. Most cited paper: Chowell et al. (2009) *The New England Journal of Medicine*, 1020 citations
3. Google Scholar H-index = 42
4. ResearchGate Score (42.3) is higher than 97.5% of ResearchGate members

### Edited Books

1. **G. Chowell** and J.M. Hyman, (Eds.) Mathematical modeling approaches for emerging and re-emerging infectious diseases. **Springer**. 2016.
2. **G. Chowell**, J.M. Hyman, L.M. Bettencourt, C. Castillo-Chavez (Eds.) Mathematical and Statistical Estimation Approaches in Epidemiology. **Springer** (2009)

### Edited Special Issues

1. **G. Chowell**, P. Sullivan, R. Rothenberg. Special Issue on Pandemic Influenza. **Annals of Epidemiology**. 6 articles. 28(5):265-266, 2018.
2. S. Blower, **G. Chowell**. Special Issue on Spatial Epidemiology and Infectious Diseases. **BMC Medicine**. In Progress.
3. **G. Chowell**, L. Simonsen, S. Bansal, A. Vespignani, C. Viboud (Eds). Special Issue on Big Data for infectious disease surveillance and control. **The Journal of Infectious Diseases**. 214(Supp 4). 10 articles, 2017.
4. C. Viboud, **G. Chowell**, L. Simonsen, A. Vespignani (Eds). Special Issue on the NIH RAPIDD Ebola Forecasting Challenge. **Epidemics**. December 2017.
5. **G. Chowell**, Z. Feng, B. Song. Special issue dedicated to Carlos Castillo-Chavez on his 60th birthday. **Mathematical Biosciences and Engineering** (31 articles). (01 September 2013).
6. **G. Chowell**, C. Castillo-Chavez. Mitigating the Spread of A/H1N1: Lessons Learned from Past Outbreaks. **Mathematical Biosciences and Engineering** (13 articles). (01 January 2011).
7. M. A. Miller, **G. Chowell**, V. Parekh, C. Viboud. Historical Influenza Pandemics: Lessons Learned. **Vaccine** Journal Volume 29, Supplement 2, Pages B1-B70 (22 July 2011;11 articles).

**Journal Publications (Lead author listed first, Senior author(s) listed last, \*= Student authors, \*\* = Postdocs)**

### *Peer-Reviewed Articles*

1. Mizumoto K, Kobayashi T, **Chowell G**. Transmission potential of modified measles during an outbreak, Japan, March-May 2018. **Eurosurveillance** 2018 Jun;23(24).
2. Gordon A, Gresh L, Ojeda S, **Chowell G**, Gonzalez K, Sanchez N, Saborio S, Mercado JC, Kuan G, Balmaseda A, Harris E. Differences in Transmission and Disease Severity between Two Successive Waves of Chikungunya. **Clin Infect Dis**. 2018.
3. Pell B, Phan T, Rutter EM, **Chowell G**, Kuang Y. Simple multi-scale modeling of the transmission dynamics of the 1905 plague epidemic in Bombay. **Math Biosci**. 2018 Jul;301:83-92.
4. **Chowell G**, Sullivan P, Rothenberg R. Introduction to symposium: a century after the 1918 influenza pandemic. **Ann Epidemiol**. 2018 May;28(5):265-266.
5. Simonsen L, **Chowell G**, Andreasen V, Gaffey R, Barry J, Olson D, Viboud C. A review of the 1918 herald pandemic wave: importance for contemporary pandemic response strategies. **Ann Epidemiol**. 2018 May;28(5):281-288.

6. Dahal S\*, Jenner M, Dinh L, Mizumoto K, Viboud C, **Chowell G**. Excess mortality patterns during 1918-1921 influenza pandemic in the state of Arizona, USA. **Ann Epidemiol**. 2018 May;28(5):273-280.
7. Alonso WJ, Nascimento FC, **Chowell G**, Schuck-Paim C. We could learn much more from 1918 pandemic-the (mis)fortune of research relying on original death certificates. **Ann Epidemiol**. 2018 May;28(5):289-292.
8. Ramiro D, Garcia S, Casado Y, Cilek L\*\*, **Chowell G**. Age-specific excess mortality patterns and transmissibility during the 1889-1890 influenza pandemic in Madrid, Spain. **Ann Epidemiol**. 2018 May;28(5):267-272.
9. **G. Chowell**. Fitting dynamic models to epidemic outbreaks with quantified uncertainty: A primer for parameter uncertainty, identifiability, and forecasts. **Infectious Disease Modeling** 2017; 2 (issue 3) 379-398.
10. M. I. Nelson, J.O. Lloyd-Smith, L. Simonsen, A. Rambaut, E.C. Holmes, **G. Chowell**, M.A. Miller, D.J. Spiro, B. Grenfell, C. Viboud. Fogarty International Center collaborative networks in infectious disease modeling: lessons learnt in research and capacity building.**Epidemics**.
11. H. Tian, S. Hu, B. Cazelles, **G. Chowell**, L. Gao, M. Laine, Y.-P. Li, H. Yang, L. Yidan, Q. Yang, T. Xin, R. Huang, O.N. Bjrnstad, H. Xiao, N.C. Stenseth. Rapid urbanization prolongs hantavirus epidemics in cities. **PNAS** 2018 May 1;115(18):4707-4712.
12. D. Mertz, C. Ka-Fung Lo, L. Lytvyn, J. R. Ortiz, M. Loeb for the FLURISK (G. Chowell). Pregnancy as a Risk Factor for Severe Influenza Infection: An Individual Participant Data Meta-Analysis. **BMJ**.
13. D.W. Shanafelt\*\*, J. Glyn, M. Lima, C. Perrings, **G. Chowell**. Forecasting the 2001 foot-and-mouth disease epidemic in the United Kingdom. **EcoHealth** 2017 Dec 13.
14. L. Dinh\*, **G. Chowell**, R. Rothenberg. Growth scaling for the early dynamics of HIV/AIDS epidemics in Brazil and the influence of socio-demographic factors. **Journal of Theoretical Biology**. 2018 Apr 7;442:79-86.
15. T. Ganyani\*, C. Faes, **G. Chowell**, N. Hens. On the estimation of the basic reproduction number using non-linear mass action principle based epidemic models. **Statistics in Medicine**. In Press.
16. Ajelli M, Zhang Q, Sun K, Merler S, Fumanelli L, **Chowell G**, Simonsen L, Viboud C, Vespignani A. The RAPIDD Ebola forecasting challenge: Model description and synthetic data generation. **Epidemics** 2017; pii: S1755-4365(17)30143-3.
17. Viboud C, Sun K, Gaffey R, Ajelli M, Fumanelli L, Merler S, Zhang Q, **Chowell G**, Simonsen L, Vespignani A; RAPIDD Ebola Forecasting Challenge group. The RAPIDD ebola forecasting challenge: Synthesis and lessons learnt. **Epidemics**. 2017; pii: S1755-4365(17)30127-5.
18. C. Viboud, L. Simonsen, **G. Chowell**, A. Vespignani. The RAPIDD Ebola forecasting challenge special issue: Preface. **Epidemics** 2017; pii: S1755-4365(17)30163-9.
19. **G. Chowell**, C. Viboud, L. Simonsen, S. Merler, A. Vespignani. Perspectives on model forecasts of the 2014-2015 Ebola epidemic in West Africa: lessons and the way forward. **BMC Medicine** 2017;15(1):42.

20. H. Nishiura, H. Lee, B. Yuan, A. Endo, A.R. Akhmetzhanov, **G. Chowell**. Infectious disease risks among refugees from North Korea. **International Journal of Infectious Diseases** 2017; 66:22-25.
21. Moghadas SM, Shoukat A, Espindola AL, Pereira RS, Abdirizak F\*, Laskowski M, Viboud C, **Chowell G**. Asymptomatic Transmission and the Dynamics of Zika Infection. **Sci Rep.** 2017 Jul 19;7(1):5829.
22. Tian H, Yu P, **G. Chowell**, Li S, Wei J, Tian H, Lv W, Han Z, Yang J, Huang S, Zhou S, Brownstein JS, Wang J, Xu B. Severe Fever with Thrombocytopenia Syndrome Virus in Humans, Domesticated Animals, Ticks, and Mosquitoes, Shaanxi Province, China. **Am J Trop Med Hyg.** 2017 Jun;96(6):1346-1349.
23. A. Smirnova, **G. Chowell**, A primer on stable parameter estimation and forecasting in epidemiology by a problem-oriented regularized least squares algorithm. **Infectious Disease Modeling** 2017; 2(2).
24. A. Smirnova A, L. deCamp L\*, **G. Chowell**. Forecasting Epidemics Through Nonparametric Estimation of Time-Dependent Transmission Rates Using the SEIR Model. **Bulletin of Mathematical Biology** 2017; doi: 10.1007/s11538-017-0284-3.
25. **G. Chowell**, C. Viboud. Is it growing exponentially fast? – Impact of assuming exponential growth for characterizing and forecasting epidemics with initial near-exponential growth dynamics. **Infectious Disease Modeling** 2016; 1(1):71-78.
26. R. Burger, **G. Chowell**, E. Gavilan, P. Mulet, L. M. Villada. Numerical solution of a spatio-temporal gender-structured model for hantavirus infection in rodents. **Mathematical Biosciences and Engineering** 2018;15(1):95-123.
27. A. Smirnova, **G. Chowell**, L. deCamp, S. Moghadas and M. Sheppard. Improving Epidemic Size Prediction through Stable Reconstruction of Disease Parameters by Reduced Iteratively Regularized Gauss-Newton Algorithm. **Journal of Inverse and Ill-Posed Problems (JIIP)** 2017; 25(5).
28. **G. Chowell** & C. Viboud. Quantifying the fitness of antiviral-resistant influenza strains. **Lancet Infectious Diseases** 2017;17(3):250-251.
29. B. Pell\*, Y. Kuang, C. Viboud, **G. Chowell**. Using phenomenological models for forecasting the 2015 Ebola Challenge. **Epidemics** pii: S1755-4365(16)30043-3.
30. **G. Chowell** & C. Viboud. Differential mortality impact of the 1918 influenza pandemic in Chicago [Invited Commentary]. **Proceedings of the National Academy of Sciences** 2016;113(48):13557-13559.
31. **G. Chowell**, L. Simonsen, R. Fuentes, J. Flores, M. Miller, C. Viboud. Severe mortality impact of the 1957 influenza pandemic in Chile. **Influenza and Other Respiratory Viruses** 2017; 11(3):230-239.
32. L. Dinh\*, **G. Chowell**, K. Mizumoto, H. Nishiura. Estimating the subcritical transmissibility of the Zika outbreak in the State of Florida, USA, 2016. **Theoretical Biology and Medical Modelling** 2016; 13(1):20.
33. S. Lee, **G. Chowell**. Exploring optimal control strategies in seasonally varying flu-like epidemics. **Journal of Theoretical Biology.** 2016; pii: S0022-5193(16)30320-4.
34. Matias G, Haguinet F, Lustig RL, Edelman L, **Chowell G**, Taylor RJ. Model estimates of the burden of outpatient visits attributable to influenza in the United States. **BMC Infectious Diseases** 2016;16(1):641.

35. **G. Chowell**, C. Viboud, L. Simonsen, S. Moghadas. Characterizing the reproduction number for epidemics with sub-exponential growth dynamics. **J. Royal Society Interface** 2016; pii: 20160659.
36. J. Lee, **G. Chowell**, E. Jung. A dynamic compartmental model for the Middle East Respiratory Syndrome outbreak in the Republic of Korea: A retrospective analysis on control interventions and superspreading events. **Journal of Theoretical Biology** 2016;408:118-26.
37. **G. Chowell**, J. C. Cleaton\* C. Viboud. Elucidating Transmission Patterns from Internet News Reports: Ebola and MERS as case studies. **The Journal of Infectious Diseases**. 2016; 214(suppl-4):S421-S426.
38. S. Liu\*, S. Poccia\*\*, K. S. Candan, **G. Chowell**, M. L. Sapino. EpiDMS: Data Management and Analytics for Decision Making from Epidemic Spread Simulation Ensembles. **The Journal of Infectious Diseases** 2016; 214(suppl-4):S427-S432.
39. S. Bansal, **G. Chowell**, Simonsen L, Vespignani A, Viboud C. Big Data for Infectious Disease Surveillance and Modeling. **The Journal of Infectious Diseases**. 2016; 214(suppl-4):S421-S426.
40. **G. Chowell**, C. Viboud. Is it growing exponentially fast? – Impact of assuming exponential growth for characterizing and forecasting epidemics with initial near-exponential growth dynamics. **Infectious Disease Modelling** 2016; 1(1):71-78.
41. **G. Chowell**, L. Sattenspiel, S. Bansal, C. Viboud. Early sub-exponential epidemic growth: Simple models, nonlinear incidence rates, and additional mechanisms: Reply to comments on "Mathematical models to characterize early epidemic growth: A review". **Physics of Life Reviews** 2016; pii: S1571-0645(16)30089-6.
42. **G. Chowell**, L. Sattenspiel, S. Bansal, C. Viboud. Mathematical models to characterize early epidemic growth: A review. **Physics of Life Reviews** 2016; pii: S1571-0645(16)30064-1.
43. D. Gao, Lou Y, He D, Porco TC, Kuang Y, **Chowell G**, Ruan S. Prevention and Control of Zika as a Mosquito-Borne and Sexually Transmitted Disease: A Mathematical Modeling Analysis. **Sci Rep**. 2016; 6:28070. doi: 10.1038/srep28070.
44. **G. Chowell**, Hincapie-Palacio D, Ospina J, Pell B\*, Tariq A, Dahal S, Moghadas S, Smirnova A, Simonsen L, Viboud C. Using Phenomenological Models to Characterize Transmissibility and Forecast Patterns and Final Burden of Zika Epidemics. **PLoS Curr**. 2016 May 31;8. pii: ecurrents.outbreaks.f14b2217c902f453d9320a43a35b9583. doi: 10.1371/currents.outbreaks.f14b2217c902f453d9320a43a35b9583.
45. A. Cobos\*, C. Nelson\*, M. Jehn, C. Viboud, **G. Chowell**. Mortality and transmissibility patterns of the 1957 influenza pandemic in Maricopa County, Arizona. **BMC Infectious Diseases** 2016;16(1):405.
46. K. Nah, S. Otsuki, **G. Chowell**, H. Nishiura. Predicting the international spread of Middle East respiratory syndrome (MERS). **BMC Infectious Diseases** 2016;16:356.
47. C. Viboud, L. Simonsen, R. Fuentes, J. Flores, M. Miller, **G. Chowell**. Global mortality impact of the 1957 influenza pandemic. **The Journal of Infectious Diseases** 2016; 213(5):738-45.
48. C. Viboud, L. Simonsen, **G. Chowell**. A generalized-growth model to characterize the early ascending phase of infectious disease outbreaks. **Epidemics** 2016; 15, 27-37

49. M. Lima, Estay SA, Fuentes R, Rubilar P, Broutin H, **Chowell G**. Whooping cough dynamics in Chile (1932-2010): disease temporal fluctuations across a north-south gradient. **BMC Infect Dis**. 2015; 15(1):590.
50. H. Nishiura, Endo A, Saitoh M, Kinoshita R, Ueno R, Nakaoka S, Miyamatsu Y, Dong Y, **Chowell G**, Mizumoto K. Identifying determinants of heterogeneous transmission dynamics of the Middle East respiratory syndrome (MERS) outbreak in the Republic of Korea, 2015: a retrospective epidemiological analysis. **BMJ Open**. 2016; 23;6(2):e009936. doi: 10.1136/bmjopen-2015-009936.
51. K. Mizumoto, Endo A, **Chowell G**, Miyamatsu Y, Saitoh M, Nishiura H. Real-time characterization of risks of death associated with the Middle East respiratory syndrome (MERS) in the Republic of Korea, 2015. **BMC Med**. 2015; 13:228.
52. M. Sarzynska\*, E. Leicht, **G. Chowell**, and M. A. Porter. Null models for community detection in spatially embedded networks. **Journal of Complex Networks** 2015; cnv027.
53. M. Kiskowski, **G. Chowell**. Modeling household and community transmission of Ebola virus disease: epidemic growth, spatial dynamics and insights for epidemic control. **Virulence** 2016;7(2):163-73.
54. J.C. Cleaton\*, C. Viboud, L. Simonsen, A.M. Hurtado, **G. Chowell**. Characterizing Ebola Transmission Patterns based on Internet News Reports. **Clin Infect Dis**. 2015 Sep 3. pii: civ748.
55. **G. Chowell**, F. Abdirizak\*, S. Lee, J. Lee, E. Jung, H. Nishiura, C. Viboud. Transmission characteristics of MERS and SARS in the healthcare setting: a comparative study. **BMC Med**. 2015 Sep 3;13(1):210. doi: 10.1186/s12916-015-0450-0.
56. K. Mizumoto, M. Saitoh, **G. Chowell**, Y. Miyamatsu, H. Nishiura. Estimating the risk of Middle East respiratory syndrome (MERS) death during the course of the outbreak in the Republic of Korea, 2015. **Int J Infect Dis**. 2015 Aug 11;39:7-9. doi: 10.1016/j.ijid.2015.08.005.
57. D.B. Petitti, D.M. Hondula, S. Yang, S.L. Harlan, **G. Chowell**. Multiple Trigger Points for Quantifying Heat-Health Impacts: New Evidence from a Hot Climate. **Environ Health Perspect**. 2015 Jul 28.
58. H. Nishiura, Y. Miyamatsu, **G. Chowell**, M. Saitoh. Assessing the risk of observing multiple generations of Middle East respiratory syndrome (MERS) cases given an imported case. **Euro Surveill**. 2015 Jul 9;20(27). pii: 21181.
59. J. Tamerius, C. Viboud, J. Shaman, **G. Chowell**. Regional variability of specific humidity and school vacation can explain multiple spatially-focused waves of 2009 pandemic influenza in Mexico. **PLOS Computational Biology** 2015; 11(8):e1004337.
60. S. Liu\*, Y. Garg, K. S. Candan, M. L. Sapino, **G. Chowell**. NOTES2: Networks-of-Traces for Epidemic Spread Simulations. **Computational Sustainability: Papers from the 2015 AAI Workshop**
61. R. Burger, **G. Chowell**, P. Mulet, L. M. Villada. Modeling the spatial-temporal progression of the 2009 A/H1N1 influenza pandemic in Chile. **Mathematical Biosciences and Engineering** 2015; 13(1): 43-65.



62. **G. Chowell**, C. Viboud. Ebola vaccine trials: a race against the clock **Lancet Infectious Diseases**, pii: S1473-3099(15)70159-3. doi: 10.1016/S1473-3099(15)70159-3.(2015).
63. J. Wei, Li S, Dong JH, Tian H, **G. Chowell**, Tian HY, Lv W, Han ZQ, Xu B, Yu PB, Wang JJ. The first human infection with severe fever with thrombocytopenia syndrome virus in Shaanxi Province, China. **Int J Infect Dis**. 2015 Feb 24. pii: S1201-9712(15)00051-X. doi: 10.1016/j.ijid.2015.02.014.
64. M. Springborn, **G. Chowell**, M. MacLachlan, E.P. Fenichel. Accounting for behavioral responses during a flu epidemic using home television viewing. **BMC Infect Dis**. 15(1):21 (2015).
65. **G. Chowell**, C. Viboud, J.M. Hyman, L. Simonsen. The Western Africa Ebola virus disease epidemic exhibits both global exponential and local polynomial growth rates. **PLOS Currents Outbreaks** 2015.
66. **G. Chowell**, H. Nishiura. Characterizing the transmission dynamics and control of Ebola Virus Disease **PLOS Biology**, 13(1):e1002057 (2015).
67. H. Nishiura, **G. Chowell**. Theoretical perspectives on the infectiousness of Ebola virus disease. **Theor Biol Med Model**. 2015 Jan 6;12(1):1. doi: 10.1186/1742-4682-12-1.
68. **G. Chowell**, C. Viboud. Controlling Ebola: key role of treatment centers **Lancet Infectious Diseases**, pii: S1473-3099(14)71086-2 (2015).
69. R.S. Dhillon, D. Srikrishna, R.F. Garry, **G. Chowell**. Ebola control: rapid diagnostic testing. **Lancet Infectious Diseases** pii: S1473-3099(14)71035-7 (2014).
70. F.O. Fasina, Shittu A, Lazarus D, Tomori O, Simonsen L, Viboud C, **G. Chowell**. Transmission dynamics and control of Ebola virus disease outbreak in Nigeria, July to September 2014. **Eurosurveillance** 19(40):20920 (2014).
71. **G. Chowell**, H. Nishiura. Transmission dynamics and control of Ebola virus disease (EVD): a review. **BMC Medicine** 12(1):196 (2014).
72. H. Nishiura, **G. Chowell**. Feedback from modelling to surveillance of Ebola virus disease. **Eurosurveillance** 19(37). pii: 20908 (2014).
73. H. Nishiura, **G. Chowell**. Early transmission dynamics of Ebola virus disease (EVD), West Africa, March to August 2014. **Eurosurveillance** 19(36). pii: 20894 (2014)
74. J. Dvila-Torres, **G. Chowell**, V. H. Borja-Aburto, C. Viboud, C. Grajalez-Muiz, M. A. Miller. Intense Seasonal A/H1N1 Influenza in Mexico, Winter 2013-2014. **Archives of Medical Research**.
75. **G. Chowell**, S. Towers, C. Viboud, R. Fuentes, V. Sotomayor. Age-specific rates of influenza-like illness and winter school breaks in Chile, 2004-2010. **Emerging Infectious Diseases** 20(7):1203-7 (2014).
76. **G. Chowell**, L. Simonsen, J. Flores, M. A. Miller, C. Viboud. Death patterns during the 1918 influenza pandemic in Chile. **Emerging Infectious Diseases** 20(11):1803-11 (2014).
77. **G. Chowell**, S. Blumberg, L. Simonsen, M. A. Miller, C. Viboud. Synthesizing data and models for the spread of MERS-CoV: key role of index cases and hospital transmission. **Epidemics** 2014; 9:40-51 (2014).

78. **G. Chowell**, Erkoreka A, Viboud C, Echeverri-Dvila B. Spatial-temporal excess mortality patterns of the 1918-1919 influenza pandemic in Spain. **BMC Infectious Disease** 14:371 (2014).
79. M. Springborn, **G. Chowell**, M. MacLachlan, E. P. Fenichel. Can being a couch potato protect health during an epidemic? Using home television viewing to account for behavioral responses during a flu epidemic. **BMC Infectious Disease**.
80. J. Dvila-Torres, **G. Chowell**, V. H. Borja-Aburto, C. Viboud, C. Grajalez-Muiz, M. A. Miller. Substantial morbidity and mortality associated with pandemic A/H1N1 influenza in Mexico, winter 2013-2014: Gradual age shift and severity. **PLOS Currents Outbreaks**. pii: ecurrents.outbreaks.a855a92f19db1d90ca955f5e908d6631 (2014).
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1. C. Viboud, H. Broutin, **G. Chowell**. Spatial-temporal transmission dynamics and control of infectious diseases: Ebola virus disease (EVD) as a case study. In: Ecology and Evolution of Infectious Disease: pathogen control and public health management in low-income countries. B. Roche, H. Broutin, F. Simard (Eds.). 2018. Oxford University Press. 2018.
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3. Pell B, Baez J, Phan T, Gao D, **Chowell G**, Y. Kuang (2016) Patch Models of EVD Transmission Dynamics. In: Chowell G, Hyman JM, editors. Mathematical and Statistical Modeling for Emerging and Re-emerging Infectious Diseases: Springer.
4. E. Jung, J. Lee, **G. Chowell**. Evaluating the Number of Sickbeds During Ebola Epidemics Using Optimal Control Theory. In: Chowell G, Hyman JM, editors. Mathematical and Statistical Modeling for Emerging and Re-emerging Infectious Diseases: Springer.
5. **G. Chowell**, A. Colchero, S.M. Bertozzi. Modelos de transmisión de influenza y la estimación del ritmo reproductivo de la nueva influenza A(H1N1) en México. Cordova-Villalobos, J.A, Valdespino Gomez, Ponce de Leon, S., Eds. *La Epidemia de Influenza A/H1N1 en México. Editorial Medica Panamericana.* (2010)
6. **G. Chowell**, F. Brauer. The basic reproduction number of infectious diseases: Computation and estimation using compartmental epidemic models. In: *Mathematical and Statistical Estimation Approaches in Epidemiology. Chowell et al.* (Eds) **Springer** (2009).
7. D. Rios-Doria\*, **G. Chowell**, C. Munayco-Escate, A. Witthembury, C. Castillo-Chávez. Spatial and temporal dynamics of rubella in Peru, 1997-2006: Geographic patterns, age at infection and estimation of transmissibility. In: *Mathematical and Statistical Estimation Approaches in Epidemiology. Chowell et al.* (Eds) **Springer** (2009).
8. H. Nishiura, **G. Chowell**. The effective reproduction number as a prelude to statistical estimation of time-dependent epidemic trends. In: *Mathematical and Statistical Estimation Approaches in Epidemiology. Chowell et al.* (Eds) **Springer** (2009).
9. **G. Chowell** and C. Castillo-Chávez. Worst-Case scenarios and epidemics. *Bioterrorism: Mathematical Modeling Applications to Homeland Security* (2003), T. Banks, C. Castillo-Chávez Eds. **Frontiers in Applied Mathematics** Vol. 28 (SIAM, Philadelphia, 2003).
10. **G. Chowell**, A. L. Rivas, N. W. Hengartner, J. M. Hyman, C. Castillo-Chávez. Critical response to post-outbreak vaccination against foot-and-mouth disease. *Mathematical Studies of Human Disease Dynamics: Emerging Paradigms and Challenges. AMS Cotemporary Mathematics Series* Vol. 410, pp. 73-87. Gumel A. (Chief Editor), Castillo-Chávez, C., Clemence, D.P. and R.E. Mickens (2006).
11. **G. Chowell**, A. Cintron-Arias, S. Del Valle, F. Sanchez, B. Song, J. M. Hyman, H. W. Hethcote, C. Castillo-Chávez. Mathematical applications associated with the deliberate release of infectious agents. In: *Mathematical Studies of Human*

Disease Dynamics: Emerging Paradigms and Challenges. **AMS Cotemporary Mathematics Series** Vol. 410. pp. 51-71. Gumel A. (Chief Editor), Castillo-Chávez, C., Clemence, D.P. and R.E. Mickens (2006).

## REPORTS

1. **National Research Council Committee** 4/21/10  
Continuing Assistance to the National Institutes of Health on Preparation of Additional Risk Assessments for the Boston University NEIDL, Phase 1. A Letter Report.
2. **World Health Organization** 2008  
**Chowell G**, Viboud C, Wang X, Miller M. Evaluating vaccination strategies against pandemic influenza in Mexico. Geneva
3. **National Research Council Committee** 4/28/08  
Technical Input on Any Additional Studies to Assess Risk Associated with Operation of the National Emerging Infectious Diseases Laboratory, Boston University: A Letter Report
4. **National Research Council Committee** 11/21/07  
Technical Input on the National Institutes of Health's Draft Supplementary Risk Assessments and Site Suitability Analysis for the National Emerging Infectious Diseases Laboratory
5. **MTBI/SUMS** 09/04/06  
Castillo-Chávez, C., C. W. Castillo-Garsow, **G. Chowell**, D. Murillo, and M. Pshaenich. Promoting Research and Minority Participation via Undergraduate Research in the Mathematical Sciences. MTBI/SUMS-Arizona State University, In: Proceedings of the Conference on Promoting Undergraduate Research in Mathematics, Edited by Joseph Gallian
6. **MTBI Technical Report** Summer 2001  
**Chowell et al.** Disease Dynamics on Small-world and other Networks. Technical report for the Mathematical and Theoretical Biology Institute (MTBI), Cornell University, Ithaca, New York

7. **MTBI Technical Report** Summer 2000  
**Chowell et al. Deterministic and Stochastic Reaction-diffusion Models in a Ring.**  
Technical report for the Mathematical and Theoretical Biology Institute (MTBI),  
Cornell University, Ithaca, New York

OTHER  
PUBLICATIONS

1. G. Chowell. Improving our understanding of Ebola transmission characteristics and its control. **BMC Medicine Blog** (16 December 2015). ([link](#)).
2. G. Chowell. Ebola Is Bad, But Measles Was Worse. **Zócalo Public Square**. 06 October 2014.
3. G. Chowell. Some good news about Ebola: It won't spread nearly as fast as other epidemics. **The Washington Post**. 29 September 2014.
4. G. Chowell. The Good News About Ebola in America. **TIME**. 30 September 2014.
5. G. Chowell. Ebola Is No Measles. That's a Good Thing. **Slate**. 01 October 2014.

RESEARCH  
FUNDING SUPPORT **Pending Funding**

- **GSU PI NSF-IIS**  
III: Medium: Collaborative Research: Data-Driven Recommendation for Effective Planning and Response against Epidemics, **\$313,393.0**
- **GSU PI NSF-IIS**  
Spokes: MEDIUM: SOUTH: Collaborative: SmartHealth: A real-time big data analytic platform for public health workers, **\$292,366.0**

**Current Funding**

- **PI NSF CMMI #1610429**  
CDS&E/Collaborative Research: DataStorm: A Data Enabled System for End-to-End Disaster Planning and Response (GSU PI), Period: 08/2016 - 06/2019, **\$132,000.**
- **CO-PI NSF-DEB**  
RAPID/Supplemental request for grant 1414374 as part of the joint NSF-NIH-USDA Ecology and Evolution of Infectious Diseases program, UK Biotechnology and Biological Sciences Research Council grant BB/M008894/1. **\$155,000**

**Past Research Funds**

- **CO-PI NSF**  
grant 1414374 as part of the joint NSF-NIH-USDA Ecology and Evolution of Infectious Diseases program, UK Biotechnology and Biological Sciences Research Council grant BB/M008894/1 (PIs: Charles Perrings et al). Period: 06/2014 - 06/2017, **\$1,450,000.00**

- **CO-PI**, NSF-BBS-DMB  
Data Management for Real-Time Data Driven Epidemic Spread Simulations (PIs: Candan, Chowell, Sapino). Period: 9/1/2013 - 8/31/2016, **\$499,603**
- **CO-PI**, NSF  
International Research Experience for Students (IRES) Project Proposal: Population Dynamics and Complex Systems: Challenges and Opportunities (PI: Castillo-Chavez, Carlos). Period: 0/1/2013 - 9/30/2016, **\$179,936**
- **PI**, NSF RAPID No. 1518939 (GSU PI)  
RAPID: Data-Based Spatiotemporal Models of Ebola Epidemics and Control (PIs: Kuang, Chowell). Period: 12/01/2014 - 12/31/2016 **\$152,976**
- **CO-PI**, NSF RAPID No.1518939  
RAPID: Understanding the Evolution Patterns of the Ebola Outbreak in West-Africa and Supporting Real-Time Decision Making and Hypothesis Testing through Large Scale Simulations (PIs: Candan, Chowell, Sapino). Period: 12/01/2014 - 12/31/2015, **\$119,985**
- **CO-PI**, National Institutes of Health, National Institute of General Medical Studies  
Modeling Anthropogenic effects in the spread of infectious diseases. Period: 07/01/2011-09/30/2014 (PI: Charles Perrings)
- **PI** NIH IPA. Infectious Disease Dynamics, Fogarty International Center, National Institute of Health, Period: 07/01/2012 – 08/10/2014, **\$79,800**
- **PI**, Arizona Biomedical Research Commission  
Predicting viral emergence: a host shift of rabies virus from bats to carnivores in Arizona. Period: 7/1/2011 –9/30/2014, **\$251,002**
- **CO-PI**, HHS-NIH-NIGMS  
Using the Scientific CV to Study the Effects of Interventions on Research Careers (PI: Gaughan, Monica M). Period: 8/1/2013 - 7/31/2014, **\$737,500**
- **CO-PI**, National Science Foundation  
AOC: Social Dynamics in Response to Shifting Immigration Policy and Practice: Latino Social Networks, Resource Flow, and Household Reorganization. PI: Jennifer Glick. Start date: 08/15/08, **\$747,249**
- **CO-PI**, Maricopa County Department of Public Health  
Policy-oriented models for pandemic influenza, PI: Tim Lant. Period: 03/17/11 – 09/30/2011, **\$96,941**
- **CO-PI**, Arizona Biomedical Research Commission  
Ascertaining Optimum Public Health Interventions to Control the Spread of Methicillin Resistant Staphylococcus aureus Infections in the Pediatric Population, Period: 07/01/11– 07/30/2013, **\$198,880**
- **CO-PI**, National Science Foundation. Collaborative Research: Urban Vulnerability to Climate Change: A System Dynamics Analysis. PI: Sharon Harlan. Start date: 09/01/08 (36 months), **\$1,304,610.00**
- **PI**, World Health Organization, Initiative for Vaccine Research. Adaptive vaccination strategies against pandemic influenza. **\$52,000** (January-October of 2008)
- NIH IPAS: Infectious Disease Dynamics, Fogarty International Center, National Institute of Health, **\$12,868** (05/15/2008 - 08/15/2008)
- NIH IPAS: Infectious Disease Dynamics, Fogarty International Center, National Institute of Health, **\$51,250** (11/28/2008 - 07/07/2010)
- NIH IPAS: Infectious Disease Dynamics, Fogarty International Center, National Institute of Health, **\$52,865** (07/08/2010 - 07/08/2012)

## Internal Grants

- **CO-PI**, The Next Generation Program. Georgia State University  
Other PIs: Zelikovsky, Skums, Sunderraman  
Harnessing Computational Genomics and Bioinformatics to Improve Public Health.  
Supports several major faculty hires. May 2018
- **CO-PI**, The Next Generation Program. Georgia State University  
Other PIs: Jiang, Luo, Li.  
Integrative Understanding of Infectious Diseases. Supports one major faculty hire.  
May 2016.
- **PI**, College of Liberal Arts and Sciences Seed Funding. Arizona State University  
Other PI: Sherry Towers, David Schaeffer, Min Xie  
Investigating the underlying dynamics of terrorist activity. Period: 01/2013–06/2014,  
**\$46,266**
- Late lessons from early human history: Cooperation, social networks, and global health. School of Human Evolution and Social Change. Arizona State University.  
Coordinators: Hurtado, Hill, Janssen & Chowell)
- ASU Institute for Social Science Research Catalyst Grant. Interactions of Culture, Environment, and Childhood Nutritional Wellbeing in South Phoenix. PI: Wutich.  
Co-PIs: A. Brewis, C. Boone, G. Chowell-Puente, J. Glick, S. Szkupinski Quiroga, D. Winham. **\$20,000. 2008**

TEACHING AND  
MENTORING  
EXPERIENCE

SEMESTER	COURSE TITLE
<i>Fall 2016</i>	Infectious disease epidemiology and dynamics
<i>Maymester 2016</i>	Mathematical modeling of infectious disease transmission and control
<i>Spring 2016</i>	Infectious disease epidemiology and dynamics
<i>Fall 2015</i>	Infectious disease epidemiology and dynamics
<i>Fall 2014</i>	Introductions to Global Health
	Reading and Conference
<i>Spring 2014</i>	Urban and Environmental Health
	AML Capstone project
	Reading and Conference
<i>Fall 2013</i>	Urban and Environmental Health
	Reading and Conference
<i>Spring 2013</i>	Topics in Applied Mathematics
	Reading and Conference
<i>Fall 2012</i>	Introduction to Global Health
	Reading and Conference
<i>Spring 2011</i>	Dynamics on Networks
<i>Fall 2010</i>	Methods and Concepts in Epidemic modeling
<i>Spring 2010</i>	Introduction to Global Health
	Reading and Conference
<i>Fall 2009</i>	Introduction to Global Health
	Topics in Applied Mathematics in the Life and Social Sciences Seminar
	Reading and Conference
	Reading and Conference
<i>Spring 2009</i>	Topics in Applied Mathematics in the Life and Social Sciences
	Reading and Conference
	Reading and Conference
<i>Fall 2008</i>	Introduction to Global Health
	Reading and Conference
	Reading and Conference
<i>Spring 2008</i>	Introduction to Global Health
	Reading and Conference

POSTDOCTORAL  
RESEARCH  
MENTORING

**Tetsuro Kobayashi**, Distinguished International Scholar, 2017/08-2018/8. Mathematical Epidemiology.

**Kenji Mizumoto**, Distinguished International Scholar, 2017/01-2018/12. Mathematical Epidemiology.

**Xiaoxia Wang**, 2011-2012. Modeling the transmission dynamics of MRSA.

**Sunmi Lee**, 2009-2011. Optimal Control Theory for Influenza Pandemics. School of Human Evolution and Social Change (Co-mentor: Carlos Castillo-Chávez)

PHD COMMITTEES

- Bruce Pell, PhD, 2016, Committee member
- Andres Gomez, PhD, 2014, Committee member
- Oscar Patterson-Lomba, PhD, 2014, Committee member
- Anuj Mubayi, PhD, 2008, Committee member
- Daniel Rios-Doria. PhD 2010 (Chair)
- Angela Ortiz, Ph.D. 2010, Committee member
- Jose Vega, Ph.D. 2012, Committee member

PHD STUDENT  
MENTORING

- **Gabriel Rainish.** August 2017 - present.
- **Kimberlyn Roosa.** August 2017 - present. Infectious Disease Dynamics (2CI-GSU Fellow)
- **Linh Dinh.** August 2016 - present. Infectious Disease Dynamics (2CI-GSU Fellow)
- **Desiree Mustaquim.** August 2015 - present. Forecasting Seasonal Influenza Epidemics
- **Leah Moriarty.** August 2015 - present. Designing public health interventions against emerging infectious diseases
- **Linda DeCamp.** August 2016 - May 2017. Models of the spread of infectious diseases.

MPH STUDENT  
MENTORING

- **Thinh Tran .** August 2017. Forecasting the 2016 yellow fever outbreak in Angola
- **Elena Mun.** April 2017. The influence of socio-demographic factors on the 2013-16 Ebola epidemic in West Africa
- **Laura Riquelme.** August 2016 - present. Transmission and control of Zika virus disease
- **Sushma Dahal.** January 2016 - present. Mortality impact of the 1918 influenza pandemic in Arizona
- **Shawna Bronte.** January 2015 - present. Epidemiology and spatial characteristics of historical cholera epidemics
- **Julie Cleaton.** January 2014 - present. Quantifying exposure patterns of epidemiological networks of the 2014-15 Ebola epidemic in West Africa
- **Fatima Abdirizak.** January 2014 - May 2016. Quantifying exposure patterns of epidemiological networks of the 2014-15 Ebola epidemic in West Africa
- **Maryam Z. Ahmad.** August 2015 - May 2016. Characterizing the transmission dynamics of smallpox epidemics
- **Leah Pinholster.** August 2015 - May 2016. Comparative analysis of smallpox and Ebola transmission characteristics
- **Circe MacDonald.** August 2015 - May 2016. Assessing the impact of socio-economic factors on influenza and pneumonia mortality impact

UNDERGRADUATE  
STUDENT  
MENTORING

- **Julie Cleaton. ASU Barrett Honors College.** January 2014 - present. Quantifying exposure patterns of epidemiological networks of the 2014-15 Ebola epidemic in West Africa
- **April Cobos. ASU Barrett Honors College.** January 2013 - present. Quantifying and modeling the impact of the 1957 influenza pandemic in Arizona from vital records.
- **Charis Royal. ASU.** August 2013 - present. Modeling the transmission dynamics of emerging infectious diseases
- **Melinda Jenner. ASU Honors College.** January 2013 - present. Quantifying and modeling the impact of the 1918 influenza pandemic in Arizona from vital records.
- **Benjamin Kunsberg. Summer of 2005 in the Mathematical Modeling and Analysis Group at Los Alamos National Laboratory.** Mathematics department, The Johns Hopkins University. Project: *Human-mediated foot-and-mouth disease epidemic dispersal* (published in J. Vet. Med. B, 2005)
- **Julijana Gjorgjieva. Summer of 2004 at the Mathematical and Theoretical Biology Institute.** Mathematics department, Harvey Mudd College
- **Kelly Smith. Summer of 2004 at the Mathematical and Theoretical Bi-**



**ology Institute.** (Mathematics department, Clarion University of Pennsylvania)

- **Jessica Snyder. Summer of 2004 at the Mathematical and Theoretical Biology Institute.** (College of Sciences, Georgia Institute of Technology). Project: The role of vaccination in the control of SARS (published in Math. Biosci. Eng., 2005)

NATIONAL  
SERVICE

**National Research Council committees**

- *Committee on Continuing Assistance to the National Institutes of Health on Preparation of Additional Risk Assessments for the Boston University NEIDL* 09/22/10
- *Special Immunizations Program for Laboratory Personnel Engaged in Research on Countermeasures for Select Agents* 03/04/10 -present
- *Committee on Technical Input on the Supplemental Final Environmental Impact Report for the Biosquare Phase II Project* 10/19- 10/20/07
- *Technical Input on Any Additional Studies to Assess Risk Associated with Operation of the National Emerging Infectious Diseases Laboratory, Boston University: A Letter Report (2008) Board on Life Sciences (BLS)* 03/08 05/02/08

SERVICE TO  
GEORGIA STATE  
UNIVERSITY

- *Eidemiology & Biostatistics Search Committee* 08/01/2015-present
- *2CI Hiring Committee, Department of Mathematics* 05/01/2015-12/01/2015
- *Scientific committee, The 2015 Society for Mathematical Biology Meeting* 06/2015
- *Chair, P&T Committee, School of Public Health* 08/01/2015-present
- *Search Committee - Next Generation Hire on Quantitative I.D.* 01/01/2016-present

SELECTED MEDIA  
MENTIONS

1. (2018) Diario de Leon. *El tren que venció a la gripe*
2. (2018) El Español. *La gripe espaola: as fue la pandemia que mat a 40 millones de personas*
3. (2018) American Council on Science and Health, *Pandemic Flu: Beware the Herald Wave*
4. (2018) Georgia State News. *Disease Detectives are Going Back to Solve Mysteries of the 1918 Flu*
5. (2018) The Conversation, *How historical disease detectives are solving mysteries of the 1918 flu*
6. (2017) APHA, *Epidemiology expert creates modeling framework to better predict outbreaks*
7. (2017) Science Daily, *Study uses social media, internet to forecast disease outbreaks*
8. (2016) Nature News, *The snot-spattered experiments that show how far sneezes really spread*
9. (2016) Dallas Morning News, *Why is Dallas ground zero for infectious diseases like Zika*
10. (2015) Healio.com,

11. News reports on Ebola outbreak correspond with surveillance data
12. (2015) WIRED, *See how diseases spread in these mesmerizing graphics*
13. (2015) IEEE Spectrum, *Fighting Ebola with simulations and Algorithms*
14. (2015) International Business Times, *Ebola outbreak: Estimate of 1.4 million Victims Never Materialized: Now, CDC Rethinks How It Talks About Diseases Outbreak*
15. (2015) Fred Hutch, *A warning heeded yields good news on Ebola*
16. (2015) Washington Post, *How fast measles spread?*
17. (2015) News -Medica.net, *Researchers study epidemiology of Ebola Virus Disease to prevent future disease outbreaks*
18. (2015) ASU News Now, *ASU researchers set the stages for fact-based fight against Ebola*
19. (2014) TIME, *The Good News About Ebola in America*
20. (2014) Dallas Morning News, *Q and A: Will Ebola virus spread in Dallas? Not likely, expert says*
21. (2014) USA TODAY, *Reducing fever can aid spread of flu*
22. (2014) Washington Post, *How quickly Ebola spreads compared to other diseases*
23. (2014) Arizona State University, *ASU epidemiologist addresses spread of Ebola*
24. (2014) PRI, *The current Ebola outbreak is huge, but at least its not spreading particularly quickly*
25. (2014) The Guardian, *Ebola Virus Outbreaks in Nigeria, Senegal not Quite Over, Says WHO*
26. (2014) Daily Reckoning, *An Up Close Look At Ebola in Liberia and the U.S.*
27. (2014) FiveThirtyEightScience, *Is 21 Days Long Enough For Ebola Quarantine*
28. (2014) El Economista, *Las cifras ominosas del Ebola*
29. (2014) azcentral.com, *ASU professor: Ebola Spreading rapidly through West Africa*
30. (2014) ASU News Now, *Rapid interventions key to preventing Ebola outbreak*
31. (2014) Washington Post, *Some good news about Ebola: It won't spread nearly as fast as other epidemics*
32. (2014) Arizona State University, *ASU researcher offers some good news about Ebola*
33. (2014) WIRED, *Ebola unlikely to cause major outbreak beyond West Africa*
34. (2014) National Science Foundation, *Halting the spread of Ebola: Nigeria a model for quick action, scientist find*
35. (2014) Scientific American, *What will it take to contain Ebola in West Africa?*
36. (2014) Arizona Republic, *Ebola: Worry or not?*
37. (2014) Bulletin of the Atomic Scientifics, *Ebola a slow motion atomic bomb*

38. (2014) ASU News Now, *ASU undergrad recognized for research on infectious diseases*
39. (2014) Dallas Morning News, *Ebola's arrival in U.S. was inevitable, experts say*
40. (2014) Scientific American, *What Will It Take to Contain Ebola in West Africa?*
41. (2014) Chicago Daily Herald, *Some good news about Ebola: It won't spread as fast as other epidemics*
42. (2014) Zocalo Public Square, *Ebola Is Bad, But Measles Was Worse*
43. (2014) Arizona State University, *ASU epidemiologist addresses possible dengue fever outbreaks at World Cups*
44. (2014) WIRED, *The mathematics of Ebola trigger stark warnings: Act now or regret it*
45. (2014) azcentral.com, *How would Arizona handle a suspected case of Ebola ?*
46. (2014) Univision, *Lo que debes saber del virus Ebola*
47. (2014) Arizona State University, *Researchers meet at ASU to discuss swine flu strategies*
48. (2014) Wired, *Ebola Explained: What You Should and Shouldn't Worry About*
49. (2014) Washington Post, *The ominous math of the Ebola epidemic*
50. (2014) Bustle, *9 Quotes From Ebola Expert That Confirm Your Fears Are Completely Unfounded*
51. (2014) Las Provincias, *El otonio de 1918 fue letal en Valencia*
52. (2014) International Business Times, *A Ban On Air Travel From Ebola- Stricken Countries Would Backfire, Experts Say*
53. (2014) Dallas Morning News, *Expert focus on keeping Ebola in check*
54. (2012) El Universal, *Aplauden en EU medidas de Mexico contra AH1N1*
55. (2012) NIH, *Flu Pandemic Study Supports Social Distancing*
56. (2012) Voice of America, *School Closure significantly Reduced Mexican Swine Flu Cases*
57. (2011) Azteca Noticias, *Avala estudio medidas de Mexico ante virus AH1N1*
58. (2011) Voice of America, *School Closures Significantly reduced Mexican Swine Flu Cases*
59. (2011) CIDRAP, *Study finds H1N1 pandemic in Mexico more deadly*
60. (2010) Arizona State University, *Ten outstanding professors receive 2010 Faculty Achievement Awards*
61. (2009) Nature.com, *Pandemic flu: from the front lines*
62. (2009) Arizona State University, *Researchers meet at ASU to discuss swine flu strategies*
63. (2009) Arizona State University, *ASU scientist: Swine flu study requires revised public health strategies*
64. (2007) The Telegraph, *To escape flu- move to the country*
65. (2003) Washington Post, *A model of epidemic control*

## PRESENTATIONS

- Mathematical modeling of infectious disease dynamics and control** 26 July, 2018
- Mathematical modeling workshop. Universidad Católica del Maule, Talca, Chile
- Forecasting the spread and control of infectious diseases: Challenges and opportunities** 25 June, 2018
- International Workshop: Modeling and economics of infectious disease epidemics, Pontificia Universidad Católica de Chile, Santiago, Chile
- Epidemic growth scaling** 18 June 2018
- Fourth CI2MA Workshop Mathematical Models in Epidemiology, CI<sup>2</sup>MA- Universidad de Concepción, Concepción, Chile
- Scaling of epidemic growth** March 05, 2018
- Socioepidemiology Workshop, Mathematical Biosciences Institute, Ohio State University
- Evaluating epidemic threats using epidemic doubling times** November 30, 2017
- The 6th International Conference on Infectious Diseases (Epidemics 6), Sitges, Barcelona, Spain
- Age-specific mortality patterns and transmissibility during the 1889-90 influenza pandemic in Madrid, Spain** November 29, 2017
- International Seminar on Pandemics: Reflections on the Centennial of the 1918 Spanish Influenza Virus Centre for Humanities and Social Sciences, Spanish National Research Council, Madrid, Spain
- Mathematical modeling of disease spread** November 27, 2017
- International Seminar on Pandemics: Reflections on the Centennial of the 1918 Spanish Influenza Virus Centre for Humanities and Social Sciences, Spanish National Research Council, Madrid, Spain
- Epidemic Growth Scaling: Implications for forecasting epidemics and estimation of the reproduction number** September 8, 2017
- Ecology and Evolutionary Biology Seminar, Emory University, Atlanta, GA
- Early sub-exponential growth dynamics: Implications for forecasting epidemics** August 21, 2017
- The World Congress of Epidemiology, Tokyo, Japan
- Forecasting Infectious Disease Epidemics Using Dynamic Modeling: Ebola and Zika as Case Studies** June 21, 2017
- Demography Today Lecture Series. Centro de Ciencias Humanas y Sociales. Spanish Research Council.
- The power of mathematical modeling to investigate and control epidemics and pandemics** June 12, 2017
- Inaugural presentation. III Mathematics Summer School. Centro Universitario de Ciencias Exactas e Ingeniería. Universidad de Guadalajara.
- Characterizing early epidemic growth dynamics: Implications for disease forecasting and estimation of the reproduction number** December 15, 2016
- Infectious Disease Modeling Seminar. Centers for Disease Control. Atlanta, GA, USA
- Multi-year projections of Zika virus disease spread: Theory needs** December 6, 2016
- DIMACS. Berkeley University, Berkeley, USA
- To grow exponentially or not? Implications for forecasting the spread of infectious disease epidemics** November 8, 2016
- 2016 MISMS meeting, Fogarty International Center, NIH, Bethesda, MD, USA

- Mathematical models for the spread of vector-borne diseases** November 4, 2016
- International Meeting on Emerging Diseases and Surveillance (IMED), Vienna, Austria.
- Mathematical models for the spread of infectious diseases** October 6, 2016
- Mathematics Colloquium, Tulane University, New Orleans, LA.
- Sub-exponential epidemics and the reproduction number: Application to the 2014-15 Ebola epidemic in West Africa** August 12, 2016
- Epidemiology Seminar, College of Public Health, University of Georgia, Athens, GA
- Characterizing early epidemic growth patterns to improve epidemic forecasting** July 07, 2016
- Mathematical Epidemiology Workshop. CI<sup>2</sup>MA, Universidad de Concepción, Concepción, Chile
- Using phenomenological models to forecast infectious disease outbreaks** Feb 25, 2016
- NIH/RAPIDD Ebola Forecasting Challenge Workshop Ebola, Fogarty International Center, NIH, Bethesda, MD
- Ebola Forecasting Challenge Workshop** December 3, 2015
- Ebola Challenge Workshop, Fogarty International Center, NIH, Bethesda, MD
- Characterizing epidemic growth patterns during the Ebola epidemic in West Africa.** December 3, 2015
- Epidemics Conference, Clearwater Beach, Florida.
- The role of mathematical and computational modeling in responding to infectious disease epidemics** September 24, 2015
- Congress on Information Technologies, Universidad de Colima, Colima, Mexico
- Modeling the Transmission Dynamics of Ebola in West Africa** September 17, 2015
- International Leadership Visitor Program, School of Public Health, GSU
- Modeling the Transmission Dynamics of Ebola in West Africa** September 18, 2015
- Scientific Computing Day, Georgia State University, Atlanta, GA
- Ebola round table** September 03, 2015
- Mathematical & Computational Epidemiology of Infectious diseases, Erice, Italy
- Ebola epidemic growth, transmission patterns and insights for epidemic control** September 03, 2015
- Mathematical & Computational Epidemiology of Infectious diseases, Erice, Italy
- Transmission dynamics of MERS: key role of index cases and hospital transmission** August 28, 2015
- 2015 International Conference on Emerging Infectious Diseases (ICEID)
- Epidemic Growth Patterns During The Ebola Epidemic In West Africa** July 02, 2015
- Minisymposium – 2015 Society of Mathematical Biology Annual Meeting
- EpiDMS & Ebola** April 29, 2015
- With Selcuk Candan (ASU). Ebola DIVE Talk. Community Ebola Modeling Phone Call of the STEM Community.
- Characterizing epidemic growth patterns of the 2014-15 Ebola epidemic in West Africa** April 27, 2015
- Applied Mathematics Seminar. Department of Mathematics, The University of Tennessee, Knoxville, TN.

- Mathematical modeling and analyses of the 2014-15 Ebola epidemic in West Africa** April 22, 2015
- Applied Mathematics Seminar. Department of Mathematics and Statistics. Kennesaw State University
- Characterizing epidemic growth patterns of Ebola epidemics** April 15, 2015
- Seminar. Odum School of Ecology, University of Georgia, Athens, Georgia.
- Characterizing epidemic growth patterns of Ebola epidemics** March 24, 2015
- RAPID Workshop on Ebola forecasting approaches. Fogarty International Center, National Institutes of Health. Bethesda, MD
- Using simple spatial models to forecast the 2014 Ebola epidemic in West Africa** February 17-18, 2015
- Modeling Ebola in West Africa: Data, epidemiology and interventions. London School of Hygiene and Tropical Medicine, London, UK.
- The 2014 Ebola epidemic in West Africa: A comparative analysis with historical outbreaks** January 23-24, 2015
- Workshop on Modeling the Spread and Control of Ebola. Georgia Institute of Technology, Atlanta, Georgia.
- Logistic growth models for Ebola transmission** September 25, 2014
- Presentation for HHS Ebola coordination group.
- Modeling the transmission dynamics and control of Middle East Respiratory Syndrome in the Middle East and the Ebola epidemic in West Africa** November 14, 2014
- 1st. International Conference on Mathematical Modelling. Universidad Tecnológica de la Mixteca, Oaxaca, Mexico.
- Transmission dynamics and control of emerging infectious diseases** August 21, 2014
- Konkuk University, Seoul, South Korea.
- Lectures on Infectious disease modeling** August 04-10, 2014
- Short course on infectious disease modeling, The Institute of Statistical Mathematics in Tachikawa, Tokyo, Japan
- Special lecture: Modeling and policymaking: Influenza-2009 in Mexico** August 02, 2014
- Short course on infectious disease modeling, The Institute of Statistical Mathematics in Tachikawa, Tokyo, Japan
- Synthesizing data and models for the spread of Middle East Respiratory Syndrome** August 01, 2014
- The Annual Meeting of the Japanese Society for Mathematical Biology and the Society for Mathematical Biology
- Quantifying the Transmission Dynamics of Influenza** July 29, 2014
- The Annual Meeting of the Japanese Society for Mathematical Biology and the Society for Mathematical Biology
- Quantifying the transmission potential of emerging infectious diseases using mathematical modeling** May 22, 2014
- School of Public Health, Georgia State University
- Quantifying the transmission potential of emerging infectious diseases using mathematical modeling** May 22, 2014
- Department of Mathematics and Statistics, Georgia State University
- Transmission potential of influenza A/H7N9, February-May 2013, China** Nov 22, 2013
- Fourth International Conference on Infectious Disease Dynamics, Amsterdam, The Netherlands
- Modeling the dynamics of seasonal and pandemic influenza (Applied Math Seminar)** Aug 30, 2013

- Department of Mathematics, Purdue University
- Disentangling the transmission dynamics of seasonal and pandemic influenza (Colloquium)** Mar 01, 2013
- Center for Applied Mathematics, Cornell University
- MISMS: International influenza research activities at the Fogarty International Center, NIH** June 5, 2012
- Workshop on Health and Economic Impact of Influenza, Bali, Indonesia
- Transmission dynamics of the 2009 A/H1N1 influenza pandemic in Chile and other Latin American Countries** May 22, 2012
- Pontificia Universidad Catlica de Chile, Santiago, Chile
- Transmission dynamics of the 2009 A/H1N1 influenza pandemic in the Americas** May 22, 2012
- CI<sup>2</sup>MA, Universidad de Concepción, Concepción, Chile
- Dynamics of the 2009 A/H1N1 influenza pandemic** March 21, 2012
- Mathematical Biosciences Institute at Ohio State University, Columbus, OH, USA
- Spatio-temporal dynamics of 2009 A/H1N1 influenza pandemic** March 01, 2012
- Center for Infectious Disease Dynamics, The Pennsylvania State University
- Dynamics of the 2009 A/H1N1 influenza pandemic** March 21, 2012
- Mathematical Biosciences Institute at Ohio State University
- Spatio-temporal dynamics of 2009 A/H1N1 influenza in Mexico and Peru** January 19, 2012
- EPIWORK/EPIFOR 2nd International Workshop: Facing the Challenge of Infectious Diseases
- Transmission and control of seasonal and pandemic influenza** December 11, 2011
- Facultad de Medicina, Universidad de Concepcion, Concepcion, Chile
- The role of mathematics in the control of pandemic influenza: The 2009 A/H1N1 influenza pandemic** December 15, 2011
- Facultad de Ingenieria, Universidad del Desarrollo, Santiago, Chile
- Characterizing the 2009 A/H1N1 influenza pandemic** December 16, 2011
- Department of Epidemiology, Chilean Ministry of Health, Santiago, Chile
- The application of mathematical models and statistical analysis in the control of epidemics and pandemics of influenza** 6/21-24/2011
- Escuela de Modelación y Métodos Numéricos  
La Salud de la Poblacion, Analisis Demografico y Estadistico  
CIMAT, Guanajuato, Gto. Mexico
- Transmissibility and age-specific impact of the 1918 influenza pandemic in the Americas** May 18, 2011
- VIII Curso de Postgrado del Centro Superior de Investigaciones Cientificas  
La Salud de la Poblacion, Analisis Demografico y Estadistico  
Madrid, Spain
- CePoD Colloquium: Introduction to Agent-based modeling** 4/15//2011
- Center for Population Dynamics  
Arizona State University
- The Influence of climate on the spatio-temporal patterns of dengue in Peru, 1994-2008 Seminar** April 8, 2011
- School of Public Health and Tropical Medicine  
Tulane University  
New Orleans, LA USA

- Characterizing the epidemiology of the 2009 A/H1N1 influenza pandemic in Mexico** 4/8/2011
- Department of Mathematics  
Tulane University  
New Orleans, LA USA
- Adaptive Vaccination Strategies Against Pandemic Influenza** 11/4/2010
- The 2009 H1N1 influenza pandemic in Mexico: Lessons Learned  
Mexico City, Mexico
- The 1918 influenza pandemic in Latin America** 6/15/2010
- Conferencia Regional Andina sobre Enfermedades Infecciosas:  
Mejorando la Capacidad de Diagnostico del virus de la Influenza en la Región  
Lima, Peru
- Estimation of the reproduction number of seasonal and pandemic influenza**  
6/15/2010
- Conferencia Regional Andina sobre Enfermedades Infecciosas:  
Mejorando la Capacidad de Diagnostico del virus de la Influenza en la Región  
Lima, Peru
- Models of influenza transmission** 7/2–3/2009
- Modeling adaptive vaccination strategies in the context of the novel swine-origin influenza A(H1N1) virus in Mexico  
High Level Meeting on Lessons Learned from the Flu A H1N1  
Cancun, Quintana Roo, Mexico
- Patterns of influenza transmissibility and mortality** 3/6/2009
- Center for Infectious Diseases Dynamics  
The Pennsylvania State University, State College, PA
- Models of Transmission and Control for Seasonal and Pandemic Influenza**  
1/13/2009
- School of Public Health  
Universidad Autonoma de Guadalajara  
Guadalajara, Mexico
- Comparative estimation of the reproduction number of influenza** 10/29/2008
- $R_0$  and related concepts: methods and illustrations  
Paris, France
- Evaluating vaccination strategies against pandemic influenza: Mexico as a case study** 10/21/2008
- Quantitative Immunization and Vaccines Related Research (QUIVER) Advisory Committee  
The World Health Organization  
Geneva, Switzerland
- Seasonal and pandemic influenza: Transmissibility and mortality patterns**  
9/16/2008
- The 18th Annual Meeting of the Japanese Society for Mathematical Biology  
Session on Dynamics and evolution of infectious Diseases  
Kanbai-kan, Doshisha University, Kyoto, Japan
- Signatures of non-homogenous mixing in disease outbreaks** 7/30/2008
- Mathematical Epidemiology Workshop  
Banff, Alberta, Canada
- Patterns of transmissibility and mortality impact: The case of foot-and-mouth disease and influenza** 11/19–20/2007
- Austrian Academy of Sciences & Institute of Advances Studies  
Vienna, Austria
- The role of spatial heterogeneity in the spread of infectious diseases** 7/17/2007



- Conference on Mathematical and Computational Population dynamics  
Campinas, Brazil
- The 1918-19 influenza pandemic in England and Wales: Patterns of transmissibility and mortality impact** 12/3/2007
  - Department of Mathematics  
University of Florida  
Gainesville, Florida
- Transmissibility of historical pandemics and epidemics of influenza: prospects for control** 6/5/2007
  - Fogarty International Center  
National Institutes of Health  
Bethesda, MD
- Modeling and Estimation in the Transmission Dynamics of Infectious Diseases** 2/13/2007
  - Ecosystem Models Working Group  
Santa Fe Institute  
Santa Fe, New Mexico, USA
- Transmission and control of seasonal and pandemic influenza** 11/4/2006
  - Blackwell-Tapia Conference organized by the Institute of Mathematics and its Applications  
Minneapolis, Minnesota
- Learning from the Spanish Flu Pandemic in Geneva, Switzerland** 10/28/2006
  - SACNAS Annual Meeting. Session of Multidisciplinary Approaches to Biological and Computational Systems Research  
Tampa, Florida
- Transmission and Control of Seasonal and Pandemic Influenza** 10/10/2006
  - DIMACS Workshop on models of co-evolution of hosts and pathogens.  
Piscataway, New Jersey
- SARS outbreaks in Ontario, Hong Kong and Singapore: The role of rapid diagnosis and effective isolation as control mechanisms.** 9/26/2006
  - DIMACS Workshop on facing the challenges of infectious diseases in Africa: The role of mathematical modeling.  
Johannesburg, South Africa
- Generalized Interventions Against Pandemic Influenza** 6/17/2006
  - 12th International Congress on Infectious Diseases  
Influenza and Vaccines Session  
Lisbon, Portugal
- Applications of Mathematics in Public Health: Analyzing the 1918 Influenza Pandemic in Geneva, Switzerland** 3/10/2006
  - Universidad de Colima  
Colima, Colima, Mexico
- The Effects of Public Health Measures on the Transmission of SARS** 3/9/2005
  - From Cholera to Smallpox and Beyond: Mathematical Modeling for 21st Century Public Health Practice Conference  
Riverside County Department of Public Health  
Palm Springs, CA
- Mathematics Department Seminar** 10/12/2004
  - Mathematical models for Emergent and Re-Emergent Infectious Diseases: The cases of SARS and Foot-and-Mouth Disease  
Department of Mathematics and Statistics  
University of New Mexico, Albuquerque, NM
- 2003 SACNAS Conference** 10/2-4/2003

- SARS outbreaks in Ontario, Hong Kong, and Singapore: the role of diagnosis and isolation as control mechanisms  
Albuquerque, NM

**SACNAS (Society for the Advancement of Chicanos and Native Americans in Science)** 9/2002

- (*Travel Grant from Graduate School at CU*)  
Oral Presentation: Network Analysis Approach to Epidemics.  
Anaheim, California

**SACNAS (Society for the Advancement of Chicanos and Native Americans in Science)** 9/2001

- Disease Dynamics on Small-World and other Networks.  
Phoenix, Arizona

#### CONFERENCES/WORKSHOPS

##### ORGANIZED

**International Seminar on Pandemics: Reflections on the Centennial of the 1918 Spanish Influenza Virus Centre for Humanities and Social Sciences, Spanish National Research Council, Madrid, Spain** 011/27–11/29/2017

- Co-organized with: Diego Ramiro, Cécile Viboud, Lone Simonsen, Esteban Rodríguez Ocaña, María Isabel Porras Gallo, Beatriz Echeverri-Dávila, Rafael Huertas, Ricardo Campos

**NIH/RAPIDD Ebola Forecasting Challenge Workshop Fogarty International Center, National Institutes of Health, Bethesda, MD** 02/25–02/26/2016

- Co-organized with: Cecile Viboud, Lone Simonsen, and Alex Vespignani

**Minisymposium: Modeling the Spread and Control of the Ebola Virus Disease** 07/02/2015

- 2015 Annual Conference of the Society for Mathematical Biology at Georgia State
- **2015 Annual Conference of the Society for Mathematical Biology** 06/29/2015
- Georgia State University, Atlanta, GA, USA

**SIAM Conference on the Life Sciences** 08/04–08/07/2014

- Charlotte, North Carolina, USA

**NIH/RAPIDD Workshop on Ebola forecasting approaches. Fogarty International Center, National Institutes of Health, Bethesda, MD** 03/24–03/26/2015

- Co-organized with: Cecile Viboud, Lone Simonsen

**Session: Mathematical and Statistical Applications in Epidemiology and Public Health SIAM Annual Meeting, Boston, MA** 7/7–14/2006

- Co-organized with: Miriam Nuno, Sara Del Valle and Carlos Castillo-Chávez

**Computational and Mathematical Approaches to Homeland Security, Public Health Policy and Control: Challenges Posed by Emerging and Reemerging Diseases, Los Alamos National Laboratory, Los Alamos, New Mexico** 6/30–7/3/2003

- Co-organized with: Miriam Nuño, Sara Del Valle, Ariel Cintrón-Arias, Fabio Sánchez, and Carlos Castillo-Chávez