Gerardo Chowell

Assistant Professor
School of Human Evolution and Social Change
Arizona State University

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EDUCATION

Ph. D. in Biometry
Biological Statistics and Computational Biology, Cornell University,
Ithaca, New York 14853
Conferral: January 19, 2005.

Engineering in Telematics
College of Telematics, Universidad de Colima, Mexico
August 1997 - June 2001

International Programs:

Exchange student at the British Columbia Institute of Technology
British Columbia, Canada
Fall of 1998

The Spanish Agency of International Cooperation: Intercampus Program
Universidad de Cadiz, Spain
February-March, 2001

EMPLOYMENT HISTORY

Research affiliate	Fogarty International Center National Institutes of Health	June 2008 - present
Assistant Professor	School of Human Evolution and Social Change, Arizona State University	August 2007 - present
Postdoctoral Fellow	Center for Nonlinear Studies/Mathematical Modeling and Analysis Group, Los Alamos National Laboratory	2007- present
Director's Funded	Center for Nonlinear	2005-2006

Postdoctoral Fellow Studies/Mathematical Modeling and Analysis Group, Los Alamos National Laboratory

HONORS

Recognized by Chicano/Latino Faculty and Staff Association, Arizona State University
Selected by financial magazine 'Poder y Negocios' as one of 100 professors who were born in Mexico and are now teaching and making waves in the United States
Tempe, Arizona
November 1st, 2007

Director's Funded Postdoctoral Fellowship (2005-2006)
Los Alamos National Laboratory, Los Alamos, New Mexico.

National Prize for Youth 2002 (Premio Nacional de la Juventud 2002) for academic merits
Instituto Mexicano de la Juventud, Government of Mexico, DF, November 24, 2003. Award includes Diploma signed by Mexican President Vicente Fox, Gold Medal, and 110,000 Mexican pesos (more than $9,800 dollars)
(see addendum)

National Prize for Youth 2000 (honorific mention for academic merits)
Instituto Mexicano de la Juventud, Government of Mexico, Mexico, DF, January 2002

State Prize for Youth 2000 (Premio Estatal de la Juventud 2000) for academic merits
Instituto Mexicano de la Juventud, Colima, Mexico, December 2001

"Premio Peña Colorada" AWARD for academic merits
Consorcio Minero Benito Juarez, Colima, Col. Mexico, December 2001

"Arq. Rodolfo Chavez Carrillo" AWARD for academic merits
Bachillerato Tecnico No.1, Universidad de Colima, Mexico, November 1997
Award includes Diploma and Gold Medal.

TELMEX Scholarship, TELMEX Foundation, September 1999 June 2001

Academic Excellence Recognition, Universidad de Colima, 1997-2000

Creativity Contest, 3rd place, College of Telematics, Universidad de Colima, 1998

National Contest of Informatics (Mexico), 4th place, Instituto Tecnologico Autonomo de Mexico, July 1997.

Science Contests at the Universidad de Colima, Mexico:
Differential Calculus state contest, 1st place, May 1997
Analytic Geometry state contest, 1st place, December 1996

Trigonometry state contest, 2nd place, June 1996
Organic Chemistry state contest, 2nd place, December 1996
Inorganic Chemistry state contest, 1st place, June 1996

RESEARCH INTERESTS

Mathematical modeling of the spread of emerging and re-emerging infectious diseases, model validation, social networks, statistical methods in medicine, statistical applications to epidemiology, and agent-based modeling.

Publications

T. L. Burr, **G. Chowell**. The reproduction number R(t) in structured and non-structured populations**. Mathematical Biosciences and Engineering**. To appear 2008.

H. Nishiura, **G. Chowell**. Rurality and pandemic influenza: geographic heterogeneity in the risks of infection and death in Kanagawa Prefecture, Japan, from 1918-19. **The New Zealand Medical Journal** 121(1284):18-27 (2008). Associated Editorial: The clioepidemiology of pandemic influenza and next steps for pandemic influenza research in New Zealand. Nick Wilson, Michael G Baker, Lance C Jennings.

M. Nuno, T. A. Reichert, **G. Chowell**, A. B. Gumel. Protecting residential care facilities from pandemic influenza. **Proc. Nat. Acad. Sci.** 105, 10625-30 (2008)
Related Media articles:
Study outlines minimizing pandemic flu in nursing homes
http://asunews.asu.edu/20080722_flustudy

G. Chowell, P. Diaz-Duenas, D. Chowell, S. Hews, J. Ceja-Espiritu, J. M. Hyman, C. Castillo-Chavez. Diagnostic delays and epidemiology of dengue fever during the 2002 epidemic in Colima, Mexico. **Dengue Bulletin** (forthcoming)

G. Chowell, N.W. Hengartner, C.E. Ammon, J.M. Hyman. Learning from the past to prepare for the future: Modeling the impact of hypothetical interventions during the great influenza pandemic of 1918. **CHANCE** 21(2) , 55-60 (2008)

G. Chowell, C.A. Torre, C. Munyaco-Escate, L. Suárez -Ognio, R. López-Cruz, J.M. Hyman, C. Castillo-Chavez. Spatial and temporal dynamics of dengue fever in Peru: 1994-2006. **Epidemiology and Infection**, Epub-ahead of print (2008).

G. Chowell, H. Nishiura. Quantifying the transmission potential of pandemic influenza. **Physics of Life Reviews** 5, 50-77 (2008)

G. Chowell, L.M.A. Bettencourt, N. Johnson, W.J. Alonso, C. Viboud. The 1918-1919 influenza pandemic in England and Wales: Spatial patterns in transmissibility and mortality impact. **Proc. R. Soc. B** 275, 501-509 (2008)
Related Media article:
To escape flu - move to the country
http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2007/12/19/sciflu119.xml

T.L. Burr and **G. Chowell**. Signatures of non-homogeneous mixing in disease outbreaks. **Math. Comp. Model**. 48,122-140 (2008).

H. Nishiura and **G. Chowell**. Household and community transmission of the Asian influenza A (H2N2) and influenza B viruses in 1957 and 1961. **Southeast Asian J. Trop. Med. Pub. Health** 38(6), 1075-1083 (2007).

A. B. Gumel, M. Nuno, **G. Chowell.** Mathematical assessment of Canada's pandemic influenza preparedness plan**. Can. J. Inf. Dis. & Med. Microb**. (in press).

G. Chowell, M. Miller, C. Viboud. Seasonal influenza in the United States, France, and Australia: Transmission and Prospects for control. **Epidemiology and Infection** 2007 Jul 18;:1-13 [Epub ahead of print]

M. Chaffer, A. L. Rivas, D. Elad, O. Koren , S. Garazi, **G. Chowell**, S. J. Schwager. Receiver operating characteristic (ROC)-based assessment of a serological test used to detect Johne's Disease in Israeli dairy herds. **Can. J. Vet. Res.** 72:18-26 (2008).

G. Chowell, C. E. Ammon, N. W. Hengartner, J. M. Hyman. Estimating the reproduction number from the initial phase of the of the Spanish flu pandemic waves in Geneva, Switzerland. **Math. Biosci. Eng.** 4, 457-470 (2007).

L.M.A. Bettencourt, R.M. Ribeiro, **G. Chowell**, T. Lant, C. Castillo-Chavez. Towards real time epidemiology: data assimilation, modeling and anomaly detection of health surveillance data streams. **Special Volume on Biosurveillance Systems. Lecture Notes in Computer Science. Springer Verlag** (to appear, 2007).

R. I. Rodríguez-Vivas, A. L Rivas, **G. Chowell**, H. Fragoso, R. Rosario, Z. Garcia, S. D Smith, J. J. Williams, S. J. Schwager. Spatial distribution of acaricide profiles (Boophilus microplus strains susceptible or resistant to acaricides) in southeastern Mexico. **Veterinary Parasitology** 146(1-2):158-69 (2007).

G. Chowell, P. Diaz-Duenas, J. C. Miller, A. Alcazar-Velazco, J.M. Hyman, P.W. Fenimore, C. Castillo-Chavez. Estimation of the reproduction number of dengue fever from spatial epidemic data. **Math. Biosci.** 208:571-89 (2007).

G. Chowell, H. Nishiura, L.M.A. Bettencourt. Comparative estimation of the reproduction number for pandemic influenza from daily case notification data. **J. Royal Society Interface** 4, 155-166 (2007).

M. Nuno, **G. Chowell,** X. Wang, C. Castillo-Chavez. On the role of cross-immunity and survival of less-fit flu strains. **Theor. Pop. Biol.** 71 20-29 (2007).

M. Nuno, **G. Chowell**, A. Gumel. Assessing Basic Control Measures, Antivirals and Vaccine in Curtailing Pandemic Influenza: Scenarios for the US, UK, and the Netherlands. **J. Royal Society Interface** (available online, 2006).
Related media article:
Can we obtain enough drugs in a pandemic?
http://www.telegraph.co.uk/connected/main.jhtml?%20view=DETAILS&grid=A1&xml=/connected/2006/12/13/ecnpan13.xml

T. L. Burr, **G. Chowell**. Observation and model error effects on parameter estimates in the susceptible-infected-recovered epidemiological model. **Far East. J. Theor. Stat**. 19(2), 163-183 (2006)

G. Chowell, F. Sanchez, Climate-based descriptive models of dengue fever: The 2002 epidemic in Colima, Mexico. **J. Env. Health** 68 (10) Jun (2006).

G. Chowell , C. E. Ammon, N. W. Hengartner, J. M. Hyman. Estimation of the reproductive number of the Spanish Flu epidemic in Geneva, Switzerland. Proceedings of the Second European Influenza Conference (St. Julians, Malta, September, 2005). **Vaccine** 24, 6747-6750 (2006)

G. Chowell, P. Diaz-Duenas, R. Bustos-Saldana, A. Aleman-Mireles, and V. Fet. Epidemiological and Clinical Characteristics of Scorpionism in Colima, Mexico (2000-2001). **Toxicon** 47(7), 753-758 (2006).

G. Chowell, A. Cintron-Arias, S. Del Valle, F. Sanchez, B. Song, J. M. Hyman, H. W. Hethcote, C. Castillo-Chavez. Mathematical applications associated with the deliberate release of infectious agents. In: Modeling The Dynamics of Human Diseases: Emerging Paradigms and Challenges. **AMS Cotemporary Mathematics Series** Vol. 410. pp. 51-71. Gumel A. (Chief Editor), Castillo-Chavez, C., Clemence, D.P. and R.E. Mickens (2006).

G. Chowell, C. E. Ammon, N. W. Hengartner, J. M. Hyman. Transmission dynamics of the great influenza pandemic of 1918 in Geneva, Switzerland: Assessing the effects of hypothetical interventions. **J. Theor. Biol.** 241(2), 193-204 (2006).

L. Rivas, B. Kunsberg, **G. Chowell**, S. D. Smith, J. M. Hyman, S. J. Schwager. Human-mediated foot-and-mouth disease epidemic dispersal: disease and vector clusters. **J. Vet. Med. B** 53, 1-10 (2006).

G. Chowell, A. L. Rivas, N. W. Hengartner, J. M. Hyman, C. Castillo-Chavez. Critical response to post-outbreak vaccination against foot-and-mouth disease. Modeling The Dynamics of Human Diseases: Emerging Paradigms and Challenges. **AMS Cotemporary Mathematics Series** Vol. 410, pp. 73-87. Gumel A. (Chief Editor), Castillo-Chavez, C., Clemence, D.P. and R.E. Mickens (2006).

G. Chowell, E. Shim, F. Brauer, P. Diaz-Duenas, J. M. Hyman, C. Castillo-Chavez. Modeling the transmission dynamics of Acute Hemorrhagic Conjunctivitis: Application to the 2003 outbreak in Mexico. **Stat. Med**. 25(11), 1840-1857 (2006).

G. Chowell, A. L. Rivas, N. W. Hengartner, J. M. Hyman, C. Castillo-Chavez. The role of spatial mixing in the spread of foot-and-mouth disease. **Prev. Vet. Med.** 73, 297-314 (2006).

G. Chowell, A. L. Rivas, S. D. Smith, J. M. Hyman. Identification of case clusters and counties of greater infective connectivity in the 2001 Uruguayan foot-and-mouth disease epidemic. **Am. J. Vet. Res.** 67(1), 1-12 (2006).

G. Chowell, J. M. Hyman, P. Diaz-Duenas, N. W. Hengartner. Predicting scorpion sting incidence in an endemic region using climatological variables. **Int. J. Env. Health Res.** 15(6), 425-435 (2005).

G. Chowell, P. Diaz-Duenas, and D. Chowell. The dynamics of pulmonary tuberculosis in Colima, Mexico (1999-2002). **Scand. J. Infect. Dis**. 37(11), 858-862 (2005).

J. Gjorgjieva, K. Smith, **G. Chowell** , F. Sanchez, J. Snyder, and C. Castillo-Chavez. The role of vaccination in the control of SARS. **Math. Biosci. Eng**. 2(4), 753-769 (2005)

G. Chowell, C. Castillo-Chavez, P. Diaz-Duenas. Characterization of an outbreak of Acute Hemorrhagic Conjunctivitis. **Digital J. Ophtalm**. 11/1 (2005).

P. Diaz-Duenas, **G. Chowell**, G. Ceja, T. C. D'Auria, R. C. Lloyd, C. Castillo-Chavez. Pediatric electrocardiograph abnormalities following *Centruroides limpidus tecomanus* scorpion envenomation. **Toxicon** 45(1), 27-31 (2005)

G. Chowell , N. W. Hengartner, C. Castillo-Chavez, P. W. Fenimore, and J. M. Hyman. The reproductive number of ebola and the effects of public health measures: The cases of Congo and Uganda. **J. Theor. Biol**. 229(1), 119-126 (2004)

G. Chowell, C. Castillo-Chavez, P.W. Fenimore, C. Kribs-Zaleta, L. Arriola, J.M. Hyman.Model parameters and outbreak control for SARS. **Emerg. Inf. Dis.** 10 (7) (2004).

G. Chowell, J. M. Hyman, S. Eubank, C. Castillo-Chavez. Scaling laws for the movement of people between locations in a large city. **Phys. Rev. E** 68 (2003).

G. Chowell and C. Castillo-Chavez. Worst-Case scenarios and epidemics. Mathematical and Modeling Approaches to Homeland Security (2003), T. Banks, C. Castillo-Chavez Eds. Frontiers in Applied Mathematics Vol. 28 (SIAM, Philadelphia, 2003).

G. Chowell, P.W. Fenimore, M.A. Castillo-Garsow, C. Castillo-Chavez. SARS outbreaks in Ontario, Hong Kong and Singapore: the role of diagnosis and isolation as a control mechanism. **J. Theor. Biol**. 24, 1-8 (2003).
Related media article:
A Model of Epidemic Control
Scientists Chart, Laud Canada's Rapid Response to SARS
http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&contentId=A8128-2003May2&notFound=true

PhD Thesis: Mathematical Models for Emergent and Re-Emergent Infectious Diseases: Assessing the Effects of Public Health Interventions. Cornell University, Adviser: Carlos Castillo-Chavez.

Technical reports:
Deterministic and Stochastic Reaction-diffusion Models in a Ring
Technical report for the Mathematical and Theoretical Biology Institute (MTBI), Cornell University, Ithaca, New York, Summer 2000.

Disease Dynamics on Small-world and other Networks
Technical report for the Mathematical and Theoretical Biology Institute (MTBI), Cornell University, Ithaca, New York, Summer 2001

TEACHING ACTIVITIES

Spring 2008

ASB/SSH 100. Introduction to Global Health (Co-taught with Prof. Magdalena Hurtado). (190 students)

SSH 590. Reading and Conference.

Fall 2008

ASB/SSH 100. Introduction to Global Health (Co-taught with Prof. Magdalena Hurtado). (400 students)

SSH 590, SSH 790. Reading and Conference.

RESEARCH GRANT SUPPORT

- PI, World Health Organization, January-June of 2008, Initiative for Vaccine Research, $52K

- 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.

- 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.

RESEARCH EXPERIENCE

Mathematical Modeling and Analysis/Center for Nonlinear Studies
Los Alamos National Laboratory
Postdoctoral Fellow
March 2007 - present

Mathematical Modeling and Analysis/Center for Nonlinear Studies
Los Alamos National Laboratory
Director's Funded Postdoctoral Fellow
March 2005 – March 2006

Mathematical Modeling and Analysis
Los Alamos National Laboratory
Graduate Research Assistant
Los Alamos, New Mexico
August 2004 – December 2004

Mathematical and Theoretical Biology Institute
Arizona State University/Los Alamos National Laboratory
Graduate Research Assistant
Los Alamos, New Mexico
June 2004 - August 2004

Center for Nonlinear Studies (CNLS)
Los Alamos National Laboratories
Staff Research Employee
Los Alamos, New Mexico
January 2003 – January 2004

Theoretical Division (T-7 Group)
Los Alamos National Laboratory
Graduate Research Assistant
Los Alamos, New Mexico
Summer of 2002

The Spanish Agency of International Cooperation: Intercampus Program

Escuela Superior de Ingenieria, Universidad de Cadiz, Spain
February 2001- March 2001

Mathematical and Theoretical Biology Institute
Cornell University, Ithaca, New York, Summers of 2000 and 2001

EDITORIAL BOARDS

Member. SIAM Undergraduate Research Online (- 2009)

COMMITTEES

10/19-10/20/07	National Research Council	Committee on Technical Input on the Supplemental Final Environmental Impact Report for the Biosquare Phase II Project.
03/08 – 05/02/08	National Research Council	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) http://books.nap.edu/openbook.php?record_id=12208&page=1

STUDENT MENTORING

Summer of 2008
Daniel Rios-Doria (Mathematics & Statistics department, Arizona State University): Summer 2008
Project: Modeling susceptibility in epidemic spread.

Summer of 2007
Carlos A. Torre (Mathematics & Statistics department, Arizona State University): Summer 2008
Project: Spatial and temporal dynamics of dengue in Peru

Summer of 2006
Sarah Hews (Mathematics & Statistics department, Arizona State University): Summer 2006
Project: Clinical and Climatological Analysis of the 2002 Dengue Fever Epidemic in Colima, Mexico.

Summer of 2005
Benjamin Kunsberg (Mathematics department, The Johns Hopkins University): Summer 2005
Project: Human-mediated foot-and-mouth disease epidemic dispersal (published in J. Vet. Med. B, 2005)

Summer of 2004
Julijana Gjorgjieva (Mathematics department, Harvey Mudd College): Summer of 2004
Kelly Smith (Mathematics department, Clarion University of Pennsylvania)

Jessica Snyder (College of Sciences, Georgia Institute of Technology)
Project: The role of vaccination in the control of SARS (published in Math. Biosci. Eng., 2005)

ORAL AND POSTER PRESENTATIONS

Invited talk: Seasonal and pandemic influenza: Transmissibility and mortality patterns
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
September 16, 2008

Invited talk: Signatures of non-homogenous mixing in disease outbreaks
Mathematical Epidemiology Workshop
Banff, Alberta, Canada
July 30, 2008

Invited talk: Modeling the spread of infectious diseases in space and time: Foot and mouth disease and influenza as examples.
Estrella Mountain Community College
Avondale, AZ
April 25, 2008

Invited talk: The 1918-19 influenza pandemic in England and Wales: Patterns of transmissibility and mortality impact
Special Session on Recent Advances in Mathematical Biology, Ecology, and Epidemiology
American Mathematical Society Annual Meeting
San Diego, California
January 7, 2008

Colloquium: The 1918-19 influenza pandemic in England and Wales: Patterns of transmissibility and mortality impact
Department of Mathematics
University of Florida
Gainesville, Florida
December 3, 2007

Invited talk: Patterns of transmissibility and mortality impact: The case of foot-and-mouth disease and influenza
Austrian Academy of Sciences & Institute of Advances Studies
Vienna, Austria
November 19-20

Invited talk: Transmission and control of influenza epidemics and pandemics
Epidemiology Session-Annual meeting of the Society of Mathematical Biology
San Jose, California
August 1, 2007

The role of spatial heterogeneity in the spread of infectious diseases
Conference on Mathematical and Computational Population dynamics
Campinas, Brazil
July 17, 2007

Understanding the spread of infectious diseases: Linking models to data

Los Alamos Summer School
Los Alamos & UNM
Los Alamos, NM
June 25, 2007

Invited talk: Transmissibility of historical pandemics and epidemics of influenza: prospects for control
Fogarty International Center
National Institutes of Health
Bethesda, MD
June 05, 2007

Colloquium: Patterns of transmissibility and mortality impact during the 1918-19 influenza pandemic
School of Human Evolution and Social Change
Arizona State University
Tempe, AZ
May 07, 2007

Colloquium: Transmission dynamics of infectious diseases in space and time
Mathematics and Statistics Department
Arizona State University
Tempe, AZ
April 20, 2007

Invited Talk: Quantifying the Transmissibility of Seasonal and Pandemic Influenza
Workshop on the Mathematics of Global Public Health
Arizona State University
Tempe, AZ
March 10, 2007

Invited Talk: Modeling and Estimation in the Transmission Dynamics of Infectious Diseases
Ecosystem Models Working Group
Santa Fe Institute
Santa Fe, New Mexico
February 13, 2007

Invited Talk: Quantifying the Transmissibility of Seasonal and Pandemic Influenza
Arizona Days Meeting
Tucson, Arizona
February 08, 2007

Invited Talk: Comparative estimation of the reproduction number for pandemic influenza
Recent advances in Mathematical Biology, Epidemiology and Ecology
AMS Annual Meeting
New Orleans
January 08, 2007

Invited Talk: Transmission and control of seasonal and pandemic influenza
Blackwell-Tapia Conference organized by the Institute of Mathematics and its Applications
Minneapolis, Minnesota

November 04, 2006

Talk: Learning from the Spanish Flu Pandemic in Geneva, Switzerland
SACNAS Annual Meeting. Session of Multidisciplinary Approaches to Biological and Computational Systems Research
Tampa, Florida
October 28, 2006

Invited Talk: Transmission and Control of Seasonal and Pandemic Influenza
DIMACS Workshop on models of co-evolution of hosts and pathogens
Piscataway, New Jersey
October 10, 2006

Invited Talk: SARS outbreaks in Ontario, Hong Kong and Singapore: The role of rapid diagnosis and effective isolation as control mechanisms
DIMACS Workshop on facing the challenges of infectious diseases in Africa: The role of mathematical modeling
Johannesburg, South Africa
September 26, 2006

Poster: Transmission dynamics of the great influenza pandemic of 1918 in Geneva, Switzerland: Assessing the effects of hypothetical interventions.
DIMACS Workshop on facing the challenges of infectious diseases in Africa: The role of mathematical modeling
Johannesburg, South Africa
September 26, 2006

Poster: The role of spatial mixing in the spread of foot-and-mouth disease: The 2001 epidemic in Uruguay
DIMACS Workshop on facing the challenges of infectious diseases in Africa: The role of mathematical modeling
Johannesburg, South Africa
September 26, 2006

Talk: The Reproduction Number of the Spanish Flu Pandemic in Geneva, Switzerland
Session: Recent Advances in Mathematical Epidemiology
SMB-SIAM Conference on the Life Sciences
Durham, North Carolina
August 01, 2006

Invited Talk: Transmission and Control of Seasonal and Pandemic Influenza
Summer Teacher Institute, Super Computing Challenge
Santa Fe Indian School
Santa Fe, New Mexico
July 21, 2006

Invited Talk: Estimating the reproduction number of the Spanish Flu pandemic in Geneva, Switzerland
Session: Applications of dynamical systems in biology
SIAM Annual Meeting
July 11, 2006

Boston, MA

Talk: Generalized Interventions Against Pandemic Influenza
12th International Congress on Infectious Diseases
Influenza and Vaccines Session
Lisbon, Portugal
June 17, 2006

Talk: Transmission and Control of Seasonal and Pandemic Influenza
Postdoc Seminar
Center for Nonlinear Studies, Los Alamos National Laboratory
Los Alamos, NM
May 11, 2006

Invited talk: Transmission and Control of Seasonal and Pandemic Influenza
Seminar of the Mathematics and Statistics Department
Arizona State University
Tempe, AZ
April 28, 2006.

Poster: Estimation of the reproductive number of the Spanish Flu epidemic in Geneva, Switzerland.
International Conference on Emerging Infectious Diseases
Atlanta, Georgia
March 21, 2006.

Invited Talk: Estimation of the reproductive number of the Spanish Flu epidemic in Geneva, Switzerland.
Session of Ecology and Epidemiology
International Congress on the Applications of Mathematics
Universidad de Chile
Santiago, Chile
March 16, 2006

Invited Talk: Applications of Mathematics in Public Health: Analyzing the 1918 Influenza Pandemic in Geneva, Switzerland.
Universidad de Colima
Colima, Colima, Mexico
March 10, 2006

Invited Talk: Transmissibility of the 1918 influenza pandemic and the effect of hypothetical interventions
Avian Influenza Information Exchange
MSL Auditorium
Los Alamos National Laboratory
Los Alamos, New Mexico
February 22, 2005.

Talk: Containing the next influenza pandemic: Lessons and knowledge from past epidemics.
T-10, Biological Sciences group seminar

Los Alamos National Laboratory
Los Alamos, New Mexico
December 07, 2005.

Poster: Transmission dynamics of the great influenza pandemic of 1918 in Geneva, Switzerland: Assessing the effects of hypothetical interventions.
Second European Influenza Conference
St.-Julians, Malta
September 10-14, 2005

Discussion leader: Parameter estimation, uncertainty and sensitivity in epidemic modeling
Mathematical Epidemiology Workshop (PIMS)
Banff, Alberta, Canada
August 25, 2005

Talk: The 2001 Uruguayan Foot-and-Mouth Disease Epidemic: Modeling and Testing of Data-driven Hypothesis on Spatial Connectivity
Modeling the dynamics of human diseases: Emerging paradigms & Challenges
Snowbird Resort, Snowbird, UT
July 17, 2005

Talk: Modeling the 2001 Foot-and-Mouth Epidemic in Uruguay using Geo-referenced data
2005 SIAM Annual Meeting,
New Orleans, LA.
July 11-15, 2005

Poster: Spatial Patterns of Infection: Modeling the 2001 Foot-and-Mouth Epidemic in Uruguay using Geo-referenced data
1st Young Researchers Workshop
Mathematical Biology Institute (MBI)
Ohio State University
Columbus, Ohio
April 01, 2005

Invited talk: The Effects of Public Health Measures on the Transmission of SARS
From Cholera to Smallpox and Beyond: Mathematical Modeling for 21st Century Public Health Practice Conference
Riverside County Department of Public Health
Palm Springs, CA
March 09, 2005

Invited Talk: Mathematics Department Seminar
Invited talk: 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
October 12, 2004

Invited Talk: Mathematical Biology Seminar
Transmission Dynamics of SARS and the Effects of Public Health Interventions
Department of Mathematics, Arizona State University, Arizona.

March 22, 2004

Talk: 2003 SACNAS Conference
SARS outbreaks in Ontario, Hong Kong, and Singapore: the role of diagnosis and isolation as control mechanisms
2-4 October, 2003
Albuquerque, NM

Poster: Conference on Growing Networks and Graphs in Statistical Physics, Finance, Biology and Social Systems
(Travel Grant from Graduate School at CU)
University of Rome La Sapienza
Poster Presentation (with Zoltan Torockzkai): Halting Epidemics in Proximity Networks
September 1-5, 2003
Rome, Italy

Poster: Networks: Structure, Dynamics and Function
Center for Nonlinear Studies, Los Alamos National Laboratory
Poster presentation (with Zoltan Torockzkai): Halting Epidemics in Proximity Networks
May 12-16, 2003
Los Alamos, New Mexico.

Talk: SACNAS (Society for the Advancement of Chicanos and Native Americans in Science)
(Travel Grant from Graduate School at CU)
Oral Presentation: Network Analysis Approach to Epidemics.
Anaheim, California.
September 2002

Talk: SACNAS (Society for the Advancement of Chicanos and Native Americans in Science)
Disease Dynamics on Small-World and other Networks.
Phoenix, Arizona
September 2001

Poster: International Symposium at the UMET
Disease Dynamics on Small-World and other Networks,
San Juan, Puerto Rico
October 2001

Poster: AMS (American Mathematical Society)
(Travel Grant from Graduate School at CU)
Disease Dynamics on Small-World and other Networks
San Diego, California
January 2002

Poster: SACNAS (Society for the Advancement of Chicanos and Native Americans in Science)
Deterministic and Stochastic Reaction Diffusion models in a Ring
Atlanta, Georgia

October 2000

Poster: AMS (American Mathematical Society)
Deterministic and Stochastic Reaction Diffusion models in a Ring
New Orleans, LA
January 2001

CONFERENCES AND WORKSHOPS CO-ORGANIZED

Session: Mathematical and Statistical Applications in Epidemiology and Public Health SIAM Annual Meeting
Co-organized with: Miriam Nuno, Sara Del Valle and Carlos Castillo-Chavez
July 07 - July 14, 2006
Boston, MA

Computational and Mathematical Approaches to Homeland Security, Public Health Policy and Control: Challenges Posed by Emerging and Reemerging Diseases
Co-organized with: Miriam Nuno, Sara Del Valle, Ariel Cintron-Arias, Fabio Sanchez, and Carlos Castillo-Chavez
Los Alamos National Laboratory
Conference Organizer
June 30 - July 3, 2003
Los Alamos, New Mexico

Reviewer for: American Journal of Epidemiology, Journal of Theoretical Biology, Mathematical Biosciences, Bulletin of Mathematical Biology, Mathematical Biosciences and Engineering, Mathematical and Computer Modeling, Statistics in Medicine, IEEE Transactions on Biomedical Engineering, Theoretical Biology and Medicine, Dengue Bulletin, PLoS Computational Biology, BMC Public Health, BMC Infectious Diseases, Proceedings of the Royal Society: Biological Sciences, Proceedings of the Royal Society: Interface, Nonlinear Analysis Series B: Real World Applications.

MEMBER OF PROFESSIONAL ORGANIZATIONS

- Society of Mathematical Biology

- American Mathematical Society

On the Mexican National Prize for Youth

The Mexican National Prize for Youth is awarded by the Mexican Institute of Youth or Instituto Mexicano de la Juventud. Established by the Mexican legislature in 1998, the Institute of Youth is a federal agency that promotes participation by young people aged 12 to 29 in improving the social, cultural and living standards for the Mexican nation and its 34 million youth.

The prize is presented by Mexican President at the presidential residence of Los Pinos in Mexico City. The award recognizes cumulative academic activities, including research, publications, invited talks, awards and community service. The award includes a diploma, a gold medal and 110,000 Mexican pesos (more than $9,800). More information at:
http://www.sep.gob.mx/wb2/sep/sep_Premio_Nacional_de_la_Juventud

REFERENCES

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