

Giao T. Huynh

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USA

Research Interests Dynamics of virus and bacteria infections inducing cancers. Specifically, modeling the Epstein-Barr viral dynamics and the associations of the infections with the development of infectious mononucleosis and cancers.

Education University of Utah, Salt Lake City, UT USA
Ph.D., Applied Mathematics, 2010
Thesis: Mathematical Models of Epstein-Barr Virus Infection and Associated Diseases
Advisor: Frederick R. Adler

University of Utah, Salt Lake City, UT USA
M.S., Applied Mathematics, May 2006
Focus: Mathematical Biology
Advisor: Frederick R. Adler

University of New Hampshire, Durham, NH USA
B.Sc., Mathematics, May 2004
Area of Special Interest: Mathematical Ecology
Second Major: Economics
Summa cum laude

Honors and Fellowships National Science Foundation (NSF) Research Training Group (RTG) Grant, 2008-2010
NSF Graduate Student Award for the 57th Lindau Meeting of Nobel Laureates and Students, 2007
NSF Integrative Graduate Education and Research Traineeship (IGERT), 2004-2006
College of Engineering and Physical Science Scholarship, 2002-2004
University of New Hampshire Academic Merit Scholarship, 2002-2004

Research Experience Oakland University, Rochester Hills, MI USA
Department of Mathematics and Statistics
Postdoctoral Research Scientist 2010-present
Developing mathematical models of Epstein-Barr viral and herpes simplex viral kinetics
Mentor: Libin Rong

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Tufts University, Massachusetts USA
Department of Immunology, The Thorley-Lawson Laboratory
Research Assistant Summer 2007
The Dynamics of Epstein-Barr Virus Infection
Advisors: David Thorley-Lawson, and Mike Shapiro

University of Utah, Salt Lake City, UT USA
Department of Biology
Research Assistant Summer 2005
Molecular Evolutionary Analysis of Type III Secretion System
Advisors: Colin Dale, and Frederick Adler

University of New Hampshire, Durham, NH USA
Department of Mathematics
UROP and McNair Research Fellow 2002-2003
Wave Speed Analysis for Mountain Pine Beetle Epidemic
Advisor: Kelly Black

Publications

Huynh, G.T. and Adler, F.R. (2011). Alternating host cell tropism shapes the persistence, evolution and coexistence of Epstein-Barr virus infection in humans. *B. Math. Biol.* 73. 1754-1773

Huynh, G.T. and Adler, F.R. (2011). Mathematical modeling the age dependence of Epstein-Barr virus associated infectious mononucleosis. *Math. Med. Biol.* (Epub ahead of print)
(<http://imammb.oxfordjournals.org/content/early/2011/06/22/imammb.dqr007.abstract>)

Huynh, G.T. and Rong, L. (2011). Modeling the dynamics of virus shedding into the saliva of Epstein-Barr virus positive individuals. (submitted for publication)

Pawelek, K.A. Huynh, G.T., Quinlivan, M., Cullinane, A., Rong, L., and Perelson, A.S. (2011). Modeling the within-host dynamics of influenza virus infection including immune responses. (submitted for publication)

Huynh, G.T. and Adler, F.R. (2011). Modeling the association of Epstein-Barr virus infection with the development of nasopharyngeal carcinoma. (in preparation)

Huynh, G.T. and Adler, F.R. (2011). Mechanisms of Epstein-Barr virus switching tropism: the effects of viral glycoprotein 42. (in preparation)

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- Teaching Experience** University of Utah, Salt Lake City, UT, USA
Department of Mathematics
RTG Fellow
REU: Mathematical Model of Rift Valley Fever Virus Epidemiology 2009-2010
Math 3900: Mathematics in Medicine and Physiology 2008-2009
- University of Utah, Salt Lake City, UT, USA
Department of Mathematics
Instructor
Math 1090: College Algebra for Business and Social Sciences 2006-2007
Math 1100: Business Calculus 2007-2008
- University of New Hampshire, Durham, NH, USA
The Mathematic Center
Tutor 2001-2004
Subjects: Calculus I, II, III, Differential Equations, Linear Algebra, and Probability and Statistics
- Presentation** Modeling the Association of Epstein-Barr Virus Infection with the Development of Nasopharyngeal Carcinoma
AWM Workshop at ICIAM 2011
Vancouver, Canada
July 2010
- Alternating Host Cell Tropism Shapes the Persistence, Evolution and Coexistence of Epstein-Barr Virus Infection in Humans
Mathematical Biology Seminar (**Invited Talk**)
Purdue University, West Lafayette, IN, USA
October 2010
- Mathematical Modeling the Age Dependence of Epstein-Barr Virus Associated Infectious Mononucleosis
35th Annual International Herpesvirus Workshop
University of Utah, Salt Lake City, UT, USA
July 2010
- Modeling the Association of Epstein-Barr Virus Infection with Nasopharyngeal Carcinoma
SMB Annual Meeting
University of British Columbia, Vancouver, Canada
July 2009

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Modeling the Dynamics of Epstein-Barr Virus Infection and the Association with Infectious Mononucleosis

7th Annual EEID Conference

University of Georgia, Athens, GA, USA

May 2009

Modeling the Dynamics of Epstein-Barr Virus Infection

CURM Conference & MAA Intermountain Section Meeting

Brigham Young University, Provo, UT, USA

March 2009

Who? What? Why? Where? and When?

Mathematical Biology Seminar

University of Utah, Salt Lake City, UT, USA

March 2009

Modeling the Dynamics of Epstein-Barr Virus Infection

Oral Examination

University of Utah, Salt Lake City, UT, USA

April 2008

Disease Dynamics - Competition and Evolution

Graduate Student Advisory Committee (GSAC) Colloquium

University of Utah, Salt Lake City, UT, USA

March 2007

Molecular Evolutionary Analysis of Type III Secretion System

Mathematical Biology Summit

University of Utah, Salt Lake City, UT, USA

September 2005

Wave Speed Analysis for Mountain Pine Beetle Epidemic

SIAM Dynamical System Conference

Snowbird, UT, USA

Poster session, May 2003

Professional Membership

Society of Industrial and Applied Mathematics (SIAM)

Society of Mathematical Biology (SMB)

American Mathematical Society (AMS)

Association for Women in Mathematics (AWM)

Society for Women of Engineers (SWE)

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Other Academic Service

College of Science Alumni Day - Presenter, University of Utah, October 2009

Fun with Cancer Reading Group - Organizer, Department of Mathematics, University of Utah, Fall 2009 - Spring 2010

Graduate Student Advisory Committees (GSAC) - Graduate colloquium committee, 2007-2008

Mathematical Biology Workshop Co-Organizer, University of Utah, July 2007

Graduate Student Advisory Committees (GSAC) - Co-chair (2006-2007)

Pi Mu Epsilon - Tutor (2003-2004)

Connect and Diversity Program - Peer mentor (2001-2003)