

Name: David Burg

Date: 2 February, 2018

## **CURRICULUM VITAE**

### 1. **Personal Details**

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### 2. **Higher Education**

#### a. **Undergraduate and Graduate Studies**

<b>Period of Study</b>	<b>Name of Institution and Department</b>	<b>Degree</b>
1995-1999	Bar Ilan University	B.Sc
1999-2001	Bar Ilan University	M.Sc
2001-2005	Bar Ilan University	Ph.D

#### b. **Post-Doctoral Studies**

<b>Name of Host</b>	<b>Name of Institution and Department/Lab</b>	<b>Period of Study</b>
Bar Ilan University	Bar Ilan University	2006-2007

### 3. **Academic Ranks and Tenure in Institutes of Higher Education**

<b>Years</b>	<b>Name of Institution and Department</b>	<b>Rank/Position</b>
2012-present	Shamir Research Institute	Research associate
2016-present	Ohalo Academic College	Senior Lecturer
2011-2015	Ohalo Academic College	Lecturer
2008	Institute for Medical Biomathematics	Reseracher

### 4. **Offices in Academic Administration**

<b>Role</b>	<b>Name of Institution and Department</b>	<b>Years</b>
NA		

## **5. Scholarly Positions and Activities outside the University**

<b>Years</b>	<b>Memberships in Academic Professional Associations</b>
2001-present	Society for Industrial and Applied Mathematics
2001-present	Society for Mathematical Biology
2006-present	European Society of Theoretical and Mathematical Biology
2012-present	European Network for Business and Industrial Statistics
2010-present	Israeli Statistical Association
2001-present	Israeli Society of Theoretical and Mathematical Biology

<b>Years</b>	<b>Reviewing for Refereed Journal</b>
2016-present	Journal of Theoretical Biology

## **6. Active Participation in Scholarly Conferences**

### **a1. International Conferences - Held Abroad**

<b>Date</b>	<b>Name of Conference</b>	<b>Place of Conference</b>	<b>Subject of Lecture/Discussion</b>	<b>Role</b>
2005	AASLD	San Francisco, USA	Clevudine Therapy of Chronic Woodchuck Hepatitis Viral Infection	<b>Lecturer</b>
2007	3rd International Workshop on HIV Persistence during Therapy	West Indies	Viral reservoirs and HIV Pathogenesis: lessons from SIV primate models.	<b>Lecturer</b>
2013	AGU Chapman Conference	Colorado, USA	An Idealized Model of Plant and Soil Dynamics	<b>Lecturer</b>
2013	T Lymphocyte Dynamics in Acute and Chronic Viral Infection	London, United Kingdom	Effect of immune response on viral decline during anti-viral therapy - HIV, HBV, HCV	<b>Lecturer</b>

	Workshop.			
2014	Ireland International Conference on Education	Dublin, Ireland	Corporal Punishment as a Parental Practice and Anxiety in Pre-adolescent Children	<b>Lecturer</b>
2014	European Geosciences Union General Assembly,	Vienna, Austria	Modeling the Dynamics of Soil Erosion and Vegetative Control – Catastrophe and Hysteresis	<b>Lecturer</b>
2015	Eden Annual Conference	Barcelona, Spain	Perceptions regarding student workload in a short term online environment	<b>Lecturer</b>
2016	EDEN Annual Conference	Budapest, Hungary	Perceptions of learning activities and learning outcomes in a Random Short-term Learning Environment	<b>Lecturer</b>
2017	International Land Use Symposium 2017	Dresden, Germany	Big Data and Allometric-based Analysis Patterns of Cities	<b>Lecturer</b>
2017	22nd European Regional Science Meeting	University of Groningen, Netherlands	Modeling the Evolution of Cities	<b>Lecturer</b>
2017	European Colloquium on Theoretical and Quantitative Geography	University of Leeds, United Kingdom.	Recurring Patterns in Urban Growth	<b>Lecturer</b>
2017		National Taiwan University	Logistic Modeling: Software and Applications	

**a2. International Conferences - Held in Israel**

<b>Date</b>	<b>Name of Conference</b>	<b>Place of Conference</b>	<b>Subject of Lecture/Discussion</b>	<b>Role</b>
2004	IASLD	Eilat, Israel	Chronic Hepatitis B Viral Infection is not in a Steady State - Clinical Ramifications for Treatment Strategy	<b>Lecturer</b>

2015	56th Israel Geographical Society Meeting,	Hebrew University, Israel	The Dynamics of Periphery in Israel	<b>Lecturer</b>
2015	43rd Israel Society of Ecology and Environmental Sciences	Hebrew University, Israel	The critically declining population of the Griffon Vulture ( <i>Gyps fulvus</i> ) Colony at Gamla Nature Reserve during 1998-2014 indicates a chronic pressure	<b>Lecturer</b>
2015	Education for the 21st century: Multiculturalism, Children's Rights and Global Citizenship - Tempus Project DOIT International Conference	Gordon Academic College, Israel.	Problematic Internet Use and Academic Achievement Among Teacher-trainees in Israeli Colleges	<b>Lecturer</b>
2016	57th Israel Geographical Society Meeting	Tel Aviv University, Israel	Recurring Patterns in the Evolution of City Size in Israel	<b>Lecturer</b>
2016	44th Israel Society of Ecology and Environmental Sciences	Tel Aviv University, Israel	Long-term changes in Summer Temperatures in Israel: Detection of Trends in the Frequency of Extreme Events	<b>Lecturer</b>
2016	IDC	Herzliya, Israel	Social Topography - Towards a Reinterpretation of the Term "Area"	<b>Lecturer</b>
2017	58th Israel Geographical Society Meeting	Ben Gurion University, Israel	Migration Patterns of Peripheral Communities in Israel	<b>Lecturer</b>
2017	2nd Ohalo Conference on Innovative Education	Tiberias, Israel		<b>Lecturer</b>

### a3. Local Conferences

<b>Date</b>	<b>Name of Conference</b>	<b>Place of Conference</b>	<b>Subject of Lecture/Discussion</b>	<b>Role</b>
2015	Galilee Biomed Conference	Tel Hai College, Israel	Modeling the Scale-free Influenza-like Illness Dynamics in Israel	<b>Lecturer</b>
2015	Israeli Statistical Association Annual Meeting	Central Bureau of Statistics, Jerusalem	Modeling the Nonlinear Statistics of Cities in Israel	<b>Lecturer</b>
2016	1 <sup>st</sup> Golan Research Conference,	Ohalo Academic College	Modeling the Development of Golan: a Dynamical Perspective	<b>Lecturer</b>
2016	18 <sup>th</sup> Galil Research Conference	Tel Hai Academic College, Israel	Allometric Scaling of the Peripheral Israeli Cities in the Galilee	<b>Lecturer</b>
2016	18 <sup>th</sup> Galil Research Conference	Tel Hai Academic College, Israel	Evolution of City Size in the Northern Israel Periphery	<b>Lecturer</b>
2016	37 <sup>th</sup> Annual Israeli Phytopathology Society Meeting.	Vulcani Institute, Israel	Resistance of <i>Venturia inaequalis</i> to Strobilurin fungicides in Isolates from Apple Orchards in Israel	<b>Lecturer</b>
2016	2016 Conference of the Israel Society of Soil Science	Katrzin Field School, Israel	Modeling the Dynamics of Soil Erosion and Vegetative Control – Catastrophe and Hysteresis	<b>Lecturer</b>
2017	Institute for Policy Analysis,	Open University, Israel	Big Data and Complexity: Mathematical Modeling to Inform Policy	<b>Lecturer</b>
2017	22 <sup>nd</sup> Israel Regional Science Meeting	Western Galilee College, Israel	Patterns of Evolution of Cities in Israel: Periphery vs Core	<b>Lecturer</b>
2017	22 <sup>nd</sup> Israel Regional Science Meeting	Western Galilee College, Israel	Emigration Dynamics from Peripheral Cities in Israel	<b>Lecturer</b>
2017	19 <sup>th</sup> Galil Research Conference	Tel Hai Academic College, Israel	Emigration Dynamics of Peripheral Israeli Cities in the Galilee	<b>Lecturer</b>

2017	The Sea of Galilee is rising: Water, Communications and Environment Conference	Kinneret Academic College	Impact of Climate Change on Invasive Species	<b>Lecturer</b>
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**b. Organization of Conferences or Sessions**

<b>Year</b>	<b>Name of Conference</b>	<b>Place of Conference</b>	<b>Subject of Conference</b>	<b>Role</b>
2015	56th Israel Geographic Association meeting	Hebrew University	Geography	Chair
2016	57th Israel Geographic Association meeting	Tel Aviv University	Geography	Chair
2016	18th Galil Research Conference	Tel Hai Academic College	Sociology	Chair
2017	58th Israel Geographic Association meeting	Ben Gurion University	Geography	Chair
2017	19th Galil Research Conference	Tel Hai Academic College	Sociology	Chair

**7. Invited Lectures (Others than in Scholarly Conferences)**

**Abroad**

<b>Year</b>	<b>Name of Forum</b>	<b>Place of Lecture</b>	<b>Subject of Lecture</b>	<b>Role</b>
NA				

**In Israel**

<b>Year</b>	<b>Name of Forum</b>	<b>Place of Lecture</b>	<b>Subject of Lecture</b>	<b>Role</b>
2015	Conference of Heads of Municipalities	Tel Aviv, Israel	Urban Planning and Strategic Development using Allometric	

			Properties of Scale Invariant Dynamics of Cities	
2015		Reut Institute, Israel	Urban Planning and Strategic Development using Allometric Properties of Scale Invariant Dynamics of Cities	
2017		Kinneret Academic College, Israel	Periphery Dynamics: Population, Economics and Social Determinants	

## 8. Colloquium Talks

Year	Name of Forum	Place of Lecture	Presentation
2011	Faculty of Biology	Ariel University Center, Israel.	Modeling Complex Systems in the Life Sciences
2011	Department of Mathematics	Braude College, Israel	Complex Dynamical Systems and Implications in Biological Settings
2015	Department of Geography	Tel Aviv University, Israel	Scale Invariant Dynamics of Cities in Israel
2015	Israel Center for Disease Control,	Ministry of Health, Israel	Modeling Scale Invariant Epidemiological Dynamics
2016	PHE	Rockefeller University, USA	Dynamical Mathematical Modeling of Complex Systems
2016	Faculty of Medicine	Bar Ilan University	Leveraging Interactive Web-based tools for Medical Education

## 9. Research Grants

**a. Grants Awarded**

<b>Years</b>	<b>Amount</b>	<b>Funded by</b> (C= Competitive Fund)	<b>Title</b>	<b>Other Researchers</b> (Name & Role)	<b>Role in Research</b>
2001-2005	40,000 USD	Bar Ilan University	Fellowship		<b>Researcher</b>
2014-2016	30,000 EUR	OECD Tempus Project	Education		<b>Co-researcher</b>
2015-2016	250,000 NIS	Israel Science Ministry	Phytopathology	<b>Moshe Reuveni</b>	<b>Co-researcher</b>
2015-2017	95,000 NIS	Northern Research and Development	Agricultural modelling	<b>Amos Naor</b>	<b>PI</b>
2016-2017	250,000 NIS	Israel Science Ministry	Urban complex systems modelling	<b>Yitzhak Omer</b>	<b>PI</b>
2016-2017	250,000 NIS	Israel Science Ministry	Climate Change	<b>Oded Cohen</b>	<b>Co-researcher</b>
2016-2018	20,000 USD	Rockefeller University	Mathematical Modeling of Social Phenomena		<b>PI</b>
2016-2018	120,000 NIS	Tel Aviv University	Urban complex systems modelling	<b>Yitzhak Omer</b>	<b>PI</b>
2017-2018	250,000 NIS	Israel Science Ministry	Agricultural modeling and optimization	<b>Amos Naor</b>	<b>PI</b>
2017-2018	250,000 NIS	Israel Science Ministry	Urban complex systems modelling	<b>Yitzhak Omer</b>	<b>PI</b>

**b. Submission of Research Proposals – Pending**

<b>Role in Research</b>	<b>Other Researchers</b> (Name & Role)	<b>Title</b>	<b>Funded by</b> (C= Competitive Fund)	<b>Years</b>

**c. Submission of Research Proposals – Not Funded**



<b>Role in Research</b>	<b>Other Researchers (Name &amp; Role)</b>	<b>Title</b>	<b>Funded by (C= Competitive Fund)</b>	<b>Years</b>

## **10. Scholarships, Awards and Prizes**

NA

## **11. Teaching**

### **a. Courses Taught in Recent Years**

קורס שחוזר על עצמו לאורך השנים אין צורך לרשום מספר פעמים אלא לציין את השנים שבהן ניתן. אם מספר התלמידים אינו ידוע במדויק, ניתן לרשום בקירוב.

– תוסיף שורות **Tab** לחיצה על כפתור

לטבלה.

<b>Years</b>	<b>Name of Course</b>	<b>Type of Course Lecture/Seminar/ Workshop/ Online Course/ Introduction Course (Mandatory)</b>	<b>Level</b>	<b>Number of Students</b>
2011-present	Introduction to Statistics	Lecture	Undergraduate	100
2012-present	Quantitative Research Methods	Lecture	Undergraduate	100
2013-present	Applied Mathematics	Seminar	Undergraduate	20
2013-present	Statistics (for Math Majors)	Lecture	Undergraduate	20
2018-present	Statistics	Lecture	Graduate	20

### **b. Supervision of Graduate Students**

<b>Name of Student /</b>	<b>Name of Other Mentors</b>	<b>Title of Thesis</b>	<b>Degree</b>	<b>Year of Completion/ In Progress</b>	<b>Students' Achievements</b>
<b>M.A. Students</b>	Yitzhak Omer	Urban Allometrics in Israel	M.Sc.	2017	
		Urban Allometrics for Environmental Determinants	M.Sc.	2019	
<b>Ph.D. Students</b>					
	NA				

<b>Post Doctorate Students</b>					

12. Miscellaneous

**PUBLICATIONS**

### **A. Ph.D. Dissertation**

**Title: Modeling Immune Control Effects on Viral Dynamics during Primary, Chronic and Treated Phases of Viral Infection**

**Date of submission: 2006**

**Number of pages: 200**

**Language: English**

**Name of supervisor: Avidan Neumann**

**University: Bar Ilan University**

- 1) The order of the listed authors is according to their relative contribution (unless otherwise specified).
- 2) The authors contributed equally (unless otherwise specified).
- 3) First author is the main contributor, last author is usually the group head, the rest appear according to their relative contribution (unless otherwise specified).

### **Index:**

**I.F. = Impact Factor (Source & Year)**

**V = Vatat List (The Council for Higher Education) למקרים שאין מדדים אחרים**

**R = Ranking (Source & Year)**

**Q = Quartile**

**# = Student**

### **B. Scientific Books (Refereed)**

NA

### **C. Monographs**

NA

### **D. Articles in Refereed Journals**

#### **Published**

- 2015 Yaffe Y, **Burg D.** Problematic Internet Use and Academic Achievement Among Teacher-Trainees in Israeli Colleges. International Journal of Research Studies in Psychology, 4(1):25-35. doi:10.5861/ijrsp.2015.1020 (IF:0.4)
- 2015 **Burg D,** Malkinson D, Katriel G, Wittenberg, L. Modeling the Dynamics of Soil Erosion and Vegetative Control – Catastrophe and Hysteresis. Theoretical

- Ecology, 8(1):67-79. doi:10.1007/s12080-014-0233-9 (IF:2.1)
- 2014 Yaffe Y, **Burg D**. Corporal Punishment as a Parental Practice and Anxiety in Pre-adolescent Children. Journal of Social Science Studies, 2(1):13-31. doi:10.5296/jsss.v1i2.5099 (IF: n/a)
- 2009 **Burg D**, Neumann AU, Dahari H. Mathematical Modeling of Immune Control during Primary HIV-1 Infection. Journal of Theoretical Biology, 259(4):751-9. doi:10.1016/j.jtbi.2009.04.010 (IF:2.5)

### **Accepted for Publication**

### **E. Articles or Chapters in Scientific Books (Refereed)**

NA

### **F. Articles in Conference Proceedings**

NA

### **G. Entries in Encyclopedias**

NA

### **H. Other Scientific Publications**

NA

### **I. Other Works and Publications**

- 2015 **Vultures Under Threat** (Hebrew). Zavit: Science and Environment News Agency. <http://zavit.org.il/ונשרים-תחזת-איום/>
- 2016 **Soil is Burning** (Hebrew). Zavit: Science and Environment News Agency. <http://zavit.org.il/האדמה-בווערת/>.

### **J. Submitted Publications**

- Submitted* **Burg D**, Binyamin R, Yeger T, Weinberg Y, Omer I. Modeling the Scale Invariant Urban Dynamics in Israel.

- Submitted* **Burg D.** The Bilogistic Evolution of Computer Transistor. *PLOS One*.
- Submitted* **Burg D,** Wenick I. Population Trends between The Jordan and the Mediterranean.
- Submitted* **Burg D,** Choresch Y, Malkinson D, Izhaki I. Dynamics of the *Gypus fulvus* Population at the Gamla Nature Reserve.
- In Preparation***Burg D,** Broitman D, Omer I. Logistic Patterns of the Evolution of Cities
- In Preparation***Burg D,** Binyamin R, Ilatov Z, Shachter E, , Omer I. Scale Invariant Crime trends in Cities in Israel.
- In Preparation***Burg D,** Shachter E. Aliyah Dynamics in Israel.
- In Preparation*Kaur A, Onanga R, Pandrea I, Goldstein S, Mayau V, Souquière S, Ondeme A, Martinon F, Diop O, Apetrei C, Barré-Sinoussi F, Roques P, Hirsch VM, Müller-Trutwin M, **Burg D.** Primary Simian Immunodeficiency Viral Infection Dynamics in African and Asian Monkeys.

## **K. Summary of my Activities and Future Plans**