CURRICULUM VITAE

Luis Fernandez Lopez, Ph.D.

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EDUCATION & TRAINING

1997 — Ph.D. in Mathematical Epidemiology
Physics Institute of the University of São Paulo
Dissertation: Deterministic models in epidemiology: existence and uniqueness of the solutions
Graduate Advisor: Professor Francisco Antônio Bezerra Coutinho, University of Sao Paulo, Brazil

1992 — M.S. in Solid State Physics
Physics Institute of the University of São Paulo
Master Thesis: Study of a Monte Carlo method with approximated statistical distributions
Graduate Advisor: Professor Silvio Roberto de Azevedo Salinas

1989 — B.S. in Statistical Physics
Physics Institute of the University of São Paulo

DISSERTATION

Dissertation title: Deterministic models in epidemiology: existence and uniqueness of the solutions

Abstract: *In this dissertation, a method based on the topological functional analysis is presented in order to demonstrate the existence and uniqueness of solutions of a nonlinear integral equation that appears in some classic deterministic SIR (Susceptible-Infected-Recovered) epidemiological models. The demonstration of this fact is required to justify the correctness of approximate or numerical solutions. The SIR epidemiological model is used only for simplicity. The method can be easily extended to prove the existence and uniqueness of solutions of other complex integral equations that appear when more biological realities are considered. In the final part of this dissertation, as an application, it is shown how the method can easily be applied to a model for HIV infection, considering its natural history.*

Committee Chair (Promoter): Professor Francisco Antônio Bezerra Coutinho, University of Sao Paulo, Brazil

APPOINTMENTS

2009-present Research Scientist: Center for Internet Augmented Research and Assessment (CIARA)
Location: 11200 S.W. 8th St PC 312, Miami, FL 33199
School: Florida International University (FIU)
Job Summary: This position supports the FIU Faculty and Students under the FIU's Division of Information Technology's Center for Internet Augmented Research and Assessment (CIARA) by serving as Co-Principal Investigator on new grants for advanced Cyberinfrastructure, network research and academic educational outreach projects. Composes and publishes research articles in peer-reviewed journals in collaboration with CIARA colleagues. Provides interdisciplinary analysis of public policies and strategies for CIARA with emphasis on Medical Informatics, Research Networking, Cloud Computing, and Cyberinfrastructure enabled science, also known as e-Science.

2007-present Professor: Medical Informatics and Epidemiology
School: University of Sao Paulo Medical School, Department Forensic Medicine
Location: Av. Dr. Arnaldo, 455, 01246-903 São Paulo, SP, Brazil

Job Summary: Teaches courses in Medical Informatics, biostatistics and mathematical epidemiology. Works with students who are studying for a degree, certificate, or are taking classes to improve their knowledge or career skills. Plans lessons and assignments, develops instructional plans (course outlines or syllabus), assesses students' progress by grading papers, tests, and other work. Supervises graduate students who are working toward master and doctoral degrees. Serves as an academic advisor assists students with course planning and provides counseling to students on how to achieve their goals. Conducts research and experiments to advance knowledge in the field. Publishes original research and analysis in books and academic journals. Serves on academic and administrative committees that reviews and recommends policies, makes budget decisions, and advises on hiring and promotions within the department.

RESEARCH EXPERIENCE

1993-2007 Research Scientist
Medical School Foundation (Fundação Faculdade de Medicina)
School: University of Sao Paulo Medical School
Location: Av. Rebouças, 381, Jardim Paulista, CEP 05401-000, São Paulo, SP, Brazil

Job Summary: Builds research proposals. Creates and conducts scientific research under general supervision employing standard scientific principles, theories, and concepts. Works to advance research and education networking initiatives. Makes independent decisions on routine issues, methods, and recommends scientific approaches and solutions. Coordinates and communicates work efforts within the research organization. Stays abreast of latest technologies and stays current in own area of scientific expertise. Works

to expand breadth of technical knowledge. Interacts with other Engineers and Scientists worldwide in domain of expertise. Supervises graduate students who are working towards master and doctoral degrees. Publishes original research and analysis in books and academic journals. Applies for patents. Promotes teamwork, communications, and sharing of information among projects in domain of expertise. Applies for new grants and/or grants to continue research projects.

OTHER RELEVANT WORK EXPERIENCE

2003-2007 Chief Information Officer
School: University of Sao Paulo Medical School (Fundação Faculdade de Medicina)
Location: Av. Rebouças, 381, Jardim Paulista, CEP 05401-000, São Paulo, SP, Brazil

Job Summary: Evaluates the organization's IT systems Designs and applies Electronic Medical Record/Electronic Health Record software and applications. Converts and analyzes medical and health data/ Insure quality of care across multiple information systems. Leverages medical and health data to improve services and daily operations. Trains physicians and other medical professionals in IT systems and applications. Conducts data analytics for research purposes.

1999-2003 Chief Executive and Chief Technology Officer: Medical School Foundation (Fundação Faculdade de Medicina)
School: University of Sao Paulo Medical School
Location: Av. Rebouças, 381, Jardim Paulista, CEP 05401-000, São Paulo, SP, Brazil
Job Summary: The Chief Technology Officer (CTO) reports directly to the Dean. The CTO is responsible for leading the strategic planning, development, implementation of a complex technology infrastructure including hardware, software, major systems, security and networking, and development of learning technologies and applications. Also responsible for the management of all technology supporting Education, Teaching, Research, Service and Clinical mission facets of the University of São Paulo (USP) School of Medicine.

1985-1987 Financial/Administrative Delegate: League of Red Cross and Red Crescent Societies (currently, International Federation of Red Cross and Red Crescent Societies)
Location: Chemin des Crêts, 17 Petit-Saconnex, Geneva, Switzerland

Job Summary: Coordinates the compilation and consolidation of project budgets and financial plans of the emergency appeal / county plan under the direction of the Head of Country Office. Reviews and advises on the financial sections of funding proposals for donors. Pledge management notes and grants, in close collaboration with the Resource Mobilization Team following the contract matrix procedures. Ensures that Memorandums of Understanding are in place for all

programs, projects, working advances and other cooperation mechanisms between the International Federation of Red Cross (IFRC) and the local Red Cross/Crescent Society. Ensures continuous monitoring and close tracking of the income analysis, and spending of funds as per earmarking of pledges. Advises the appeal manager, Resource Mobilization, and Quality Assurance Delegate on the financial management of grants from the institutional donors and all other partners. Provides support for the IFRC local logistics team to ensure that procurement complies with the Federation's financial procedures. Acts as the lead professional to ensure the provision of technical support through an external consultant as needed to advise local Red Cross/Crescent Society leadership and Finance department on enhanced development and improved financial processes and structures. Provides support for the improvement and development of local Red Cross/Crescent Society's financial systems and procedures, taking into account existing capacities needs and the importance of processes that would address the challenging reporting requirements of partners and other stakeholders. Supports the local Red Cross/Crescent Society Finance department on development and dissemination of the finance manual and internal control procedures and ensures its compliance in functional terms. Prepares comprehensive, relevant and reliable monthly financial analysis reports for the management and provides timely advice on financial risk and exposure of emergency appeal management. Ensures effective follow-up on providing accurate, regular and timely financial reports for the Federation and donors in close collaboration with the Planning, Monitoring, Evaluation and Reporting, (PMER) and Quality Assurance and Resource Mobilization delegates.

HONOR AWARDS AND ACHIEVEMENTS

2016 Awarded the Peacemaker Medal (Medalha do Pacificador) by the Brazilian Army

Description: The Peacemaker Medal is a decoration created to reward military and civilians, national or foreign, who have rendered distinguished services to the Brazilian Army, raising the prestige of the Institution or developing friendly relations between the Brazilian Army and those of other nations.

2001-2012 Program Director of the State of São Paulo Science Foundation - Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP)
Program: TIDIA - Information Technology in the Development of the advanced Internet
http://www.fapesp.br/3122
http://www.bv.fapesp.br/39612

2001- Program Director of the State of São Paulo Science Foundation Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP)
Program: Academic
http://www.fapesp.br/en/6948
http://www.bv.fapesp.br/39613

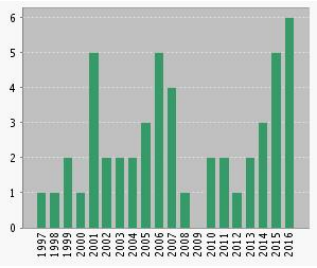
GRANTS FROM THE STATE OF SÃO PAULO (BRAZIL) SCIENCE FOUNDATION

Grant #	Value (BR$)	Average value of BR$ during the year	Value (US$)
2016/07340-0	25,156,259.23	3.4179	7,360,150.74
2014/26327-9	22,638,363.20	2.3588	9,597,406.82
2014/12051-1	19,284,785.16	2.3588	8,175,676.26
2013/11711-5	19,535,444.82	2.1649	9,023,716.95
2011/52044-6	17,282,935.51	1.6747	10,320,018.82
2010/52277-8	17,100,042.12	1.7477	9,784,312.02
2009/11388-4	16,114,837.95	1.9637	8,206,364.49
2008/52885-8	37,471,143.84	1.8388	20,378,042.11
2008/09183-2	18,032.40	1.8388	9,806.61
2008/09182-6	54,097.20	1.8388	29,419.84
2007/54949-0	20,428,511.90	1.9147	10,669,301.67
2005/60733-5	19,226,554.94	2.3909	8,041,555.46
2004/14414-2	17,388,516.88	2.9152	5,964,776.65
2004/12503-8	38,035.74	2.9152	13,047.39
2003/13708-0	12,244,924.70	3.0180	4,057,297.78
2002/13978-4	10,767,437.06	3.0415	3,540,173.29
2001/14500-8	9,303,813.07	2.3910	3,891,180.71
1999/07814-4	3,960.00	1.8387	2,153.70
1998/16278-6	54,429.99	1.1677	46,612.99
1997/04421-6	11,880.00	1.0837	10,962.44
TOTAL	**238,967,746.48**		**119,121,976.72**

PEER REVIEWED PUBLICATIONS (on 11/15/2016)

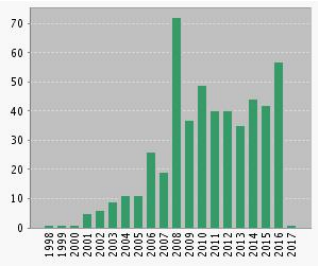
- Summary from Web of Science:

Published Items in Each Year



The latest 20 years are displayed.

Citations in Each Year



The latest 20 years are displayed.

Citation Report: 50

Results found:	50
Sum of the Times Cited:	507
Sum of Times Cited without self-citations:	435
Citing Articles:	366
Citing Articles without self-citations:	332
Average Citations per Item [?]:	10.14
h-index:	14

- Complete list of peer reviewed publications (50 indexed by Web of Science plus 6 indexed by others):

56. Burattini, M. N.; Coutinho, F. A. B.; Lopez, L. F.; et al. (2016). Potential exposure to Zika virus for foreign tourists during the 2016 Carnival and Olympic Games in Rio de Janeiro, Brazil**.** *Epidemiology and infection.* **144**(9): 1904-1906.

55. Amaku, M.; Burattini, M.N.; Coutinho, F.A.B.; Lopez, L.F.; et al. (2016). Estimating the Size of the HCV Infection Prevalence: A Modeling Approach Using the Incidence of Cases Reported to an Official Notification System. *Bulletin of mathematical biology.* **78**(5): 970-990.

54. Ximenes, R.; Amaku, M.; **Lopez, L.F.**; et al. (2016). The risk of dengue for non-immune foreign visitors to the 2016 summer olympic games in Rio de Janeiro, Brazil. *Bmc infectious diseases.* Vol. 16, Article Number: 186.

53. dos Santos, P.C.C.; Lopes, H.F.S.; Alcalde, R.; **Lopez, L.F.**; et al. (2016). Paraconsistents artificial neural networks applied to the study of mutational patterns of the F subtype of the viral strains of HIV-1 to antiretroviral therapy. *Anais da academia brasileira de ciencias.* 88(1): 323-334.

52. **Lopez, L.F.**; Amaku, M.; Coutinho, F.A.B.; et al. (2016). Modeling Importations and Exportations of Infectious Diseases via Travelers. *Bulletin of mathematical biology*. **78**(2): 185-209.

51. Burattini, Marcelo N.; **Lopez, L. F**.; Coutinho, Francisco A. B.; et al. (2016). Age and regional differences in clinical presentation and risk of hospitalization for dengue in Brazil, 2000-2014. *Clinics*. **71**(8): 455-463.

50. Massad, E.; **Lopez, L. F**.; Amaku, M.; *et al.* (2015). The risk of infectious diseases introduction into non-infected countries by travelers visiting endemic countries. The 9th European Congress on Tropical Medicine and International Health (ECTMIH), Basel, Switzerland. Proceedings *in: Tropical Medicine & International Health*. Volume 20, Special Issue: SI, Supplement: 1, PS2.098. Pages: 340-340. **DOI:** 10.1111/tmi.12574.

49. Amaku, M.; Azevedo, F.; Burattini, M. N.; **Lopez, L.F.**; *et al.* (2015). Interpretations and pitfalls in modelling vector-transmitted infections. *Epidemiology and Infection*. **143**(9): 1803-1815. **DOI**: 10.1017/S0950268814002660.

48. Wilder-Smith, A.; Leong, W.Y.; **Lopez, L.F.**; *et al.* (2015). Potential for international spread of wild poliovirus via travelers. BMC Medicine. **13**:133. **DOI** 10.1186/s12916-015-0363-y.

47. Ribeiro, A.F.; Tengan, C.; Sato, H.K.; **Lopez, L.F**.; *et al.* (2015). A public health risk assessment for yellow fever vaccination: a model exemplified by an outbreak in the state of Sao Paulo, Brazil
Memorias do Instituto Oswaldo Cruz. **110**(2): 230-234.

46. Ibarra, J.; Bezerra, J.; Morgan, H. **Lopez, L.F.**; *et al.* (2015). Benefits brought by the use of OpenFlow/SDN on the AmLight intercontinental research and education network. Edited by: Badonnel, R; Xiao, J; Ata, S; *et al. Proceedings of the 2015 IFIP/IEEE International Symposium on Integrated Network Management (IM)*. Pages: 942-947. **DOI:** 10.1109/INM.2015.7140415. (Awarded "Best Experience Paper" of the Symposium)

45. de Lima-Stein, M.L.; Alkmim, W.T.; de Souza Bizinoto, M.C.; **Lopez, L.F.**; *et al.* (2014). In Vivo HIV-1 Hypermutation and Viral Loads Among Antiretroviral-Naive Brazilian Patients. *Aids research and human retroviruses.* **30(**9): 867-880.

44. Massad, E.; Wilder-Smith, A.; Ximenes, R.; Amaku, M.; **Lopez, L. F**.; Coutinho, F. A. B.; Coelho, G. E.; Silva Jr., J. B.;Struchiner, C. J.; Burattini, M. N. (2014). Risk of symptomatic dengue for foreign visitors to the 2014 FIFA World Cup in Brazil. Memórias do Instituto Oswaldo Cruz, **109**(3): 394-397.

43. Amaku, M.; Coutinho, F. A. B.;Raimundo, S. M.; **Lopez, L. F.**; Burattini, M. N.; Massad, E. (2014). A comparative analysis of the relative efficacy of vector-control strategies against dengue fever. *Bulletin of Mathematical Biology*, **76**(3): 697-717.

42. Chaib, E., Amaku, M., Coutinho, F. A. B., **Lopez, L.F**., Burattini, M.N., D'Albuquerque, L.A.C., Massad, E. (2013). A mathematical model for optimizing the indications of liver transplantation in patients with hepatocellular carcinoma. *Theoretical Biology And Medical Modelling,* Vol. 10, Art. No. 60, Published: October 20, 2013.

41. Amaku, M., Burattini, M.N., Coutinho, F.A.B., **Lopez, L. F.**, Massad, E.(2013). Maximum Equilibrium Prevalence of Mosquito-Borne Microparasite Infections in Humans. *Computational And Mathematical Methods In Medicine,* Vol. 2013, Art.ID 659038, 7 pages.

40. Massad, E., Rocha, A.F., Coutinho, F.A.B., **Lopez, L. F.** (2013). Modelling the spread of memes: how inovations are transmitted from brain to brain. *Applied Mathematical Sciences*, **7**(46): 2295 – 2306.

39. Pachi, G.F.F., Yamamoto, J. F., Costa A.P.A., **Lopez, L. F.** (2012). Relationship between connectivity and academic productivity. *Scientometrics*, **93**, 265-278.

38. Massad, E., Coutinho, F.A.B., **Lopez, L.F.**, da Silva, D.R. (2011). Entomological repercussions of increasing environmental temperatures. Reply to comments on "Modeling the impact of global warming on vector-borne infections." *Physics of Life Reviews*, **8**, 206-207.

37. Massad, E., Coutinho, F.A.B., **Lopez, L.F.**, da Silva, D.R. (2011). Modeling the impact of global warming on vector-borne infections. *Physics of Life Reviews*, **8**, 169-199.

36. Rezende Oliveros, M.P.; Pachi, G.F.F.; Yamamoto, J. F., **Lopez, L.F.** et al. (2010). Analysis of protease treatment-associated mutations in a group of HIV-1 subtype F infected individuals with two sequences obtained in different time points. RETROVIROLOGY, **7**, Supplement 1: 30-30.

35. Rossi, M. and **Lopez, L.F.** (2010). The spread of the hiv infection on immune system: implications on cell populations and r-0 epidemic estimate. 9th International Symposium on Mathematical and Computational Biology, Brasilia, Brazil. BIOMAT 2009, 331-341.

34. Costa A.P.A., Pachi, G.F.F., Yamamoto, J. F., **Lopez, L.F.** (2009) Gestão do conhecimento nas organizações não-governamentais. *Revista Ingepro : Inovação, Gestão e Produção*, **1**, 130-139.

33. Fridman, C., dos Santos, P.C.,Kohler, P., Garcia, C.F., **Lopez, L. F.**, Massad, E., Gattás, J.F. (2008). Brazilian population profile of 15 STR markers. *Forensic Science International. Genetics*, **2**, e1-e4.

32. Burattini, M.N., Chen, M., Chow, A., Coutinho, F. A. B., Goh, K.T., **Lopez, L. F.**, Massad, E. (2008). Modelling the control strategies against dengue in Singapore. *Epidemiology and Infection*, **136**, 309-319.

31. Rossi, M. and **Lopez, L.F.** (2007). Mathematical model of immune system: implications of macriphages and dendritic cells in HIV-1 infections. Edited by Kalil, J.; CunhaNeto, E. and Rizzo, L.V., *13th International Congress of Immunology*, Rio de Janeiro, Brazil, Aug 21-25 2007, 45-48.

30. **Lopez, L.F.**, Coutinho, F.A.B., Burattini, M.N., Massad, E. (2007). Erratum to “A schematic age-structured compartment model of the impact of antiretroviral on HIV incidence and prevalence” [Math. Comput. Simul. 71 (2006) 131-148]. *Mathematics and Computers in Simulation*, **73**, p.408-408.

29. **Lopez, L. F.**, Coutinho, F. A. B., Burattini, M. N., Massad, E. (2007). Erratum to “A schematic age-structured compartment model of the impact of antiretroviral therapy on HIV incidence and prevalence” [Math. Comput. Simul. 71 (2006) 131-148]. *Mathematics and Computers in Simulation*, **73**, 341-341.

28. Massad, E., Burattini, M. N., Coutinho, F. A. B., **Lopez, L.F.** (2007). The 1918 influenza A epidemic in the city of São Paulo, Brazil. *Medical Hypotheses,* **68**, 442-445.

27. **Lopez, L. F.**, Coutinho, F. A. B.; Burattini, M. N. and Massad, E. (2006) A schematic age-structured compartment model of the impact of antiretroviral therapy on HIV incidence and prevalence. *Mathematics and Computers in Simulation,* **71**(2): 131-148.

26. Silva, M.; Carvalho, T.C.; Silveira, R.M.; **Lopez, L.F.** et al. (2006). Fiber-based testbed architecture enabling advanced experimental research. IEEE Conference: *2nd. International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities*, Barcelona, Spain, Mar 01-03, 2006, 201-208.

25. Márcia P. R. Oliveros, Clarice G. F. Pachi, Marcelo Rossi, **Lopez, L.F.** (2006) Comparative Analysis of the Prevalence of Subtype C HIV-1 resistence mutations of Zimbabwe and the South of Brasil. *Virus Reviews & Research,* **10** (2):46-50.

24. Coutinho, F.A.B.; Massad, E.; **Lopez L.F.**; et. al. (2006). Modelling plague dynamics: Endemic states, outbreaks and epidemic waves. *International Symposium on Mathematical and Computational Biology* - Petropolis, Brazil, Dec 03-08, 2005, BIOMAT 2005, 213-230.

23. Massad, E.; Coutinho, F. A. B.; Burattini, M. N.; **Lopez, L. F.** and Struchiner, C. J. (2006). The impact of imperfect vaccines on the evolution of HIV virulence. *Medical Hypoteses*, **66**, 907-911.

22. Coutinho, F. A. B., Burattini, M. N., **Lopez, L.F.**, Massad, E. (2006) Threshold Conditions of a Non-Autonomous Epidemic System Describing the Population Dynamics of Dengue. *Bulletin of Mathematical Biology*, **68**, 2263 - 2282.

21. Coutinho, F. A. B.; Burattini, M. N.; **Lopez, L. F.** and Massad, E. (2005). An approximate threshold condition for non-autonomous system: An application to a vector born infection. *Mathematics and Computers in Simulation*, **70** (3): 149-158.

20. Massad, E.; Burattini, M. N.; **Lopez, L. F.** and Coutinho, F. A. B. (2005). Forecasting versus projection models in epidemiology: The case of the SARS epidemics. *Medical Hypoteses*, **65**, 17-22.

19. Massad, E.; Coutinho, F. A. B.; Burattini, M. N. and **Lopez, L. F.** (2005). Yellow fever vaccination: How much is enough? *Vaccine***, 23** (12): 3908-3914.

18. Coutinho, F. A. B.; **Lopez, L. F.** and Massad, E. (2004). Comment on “The distribution of composite measurements: How to be certain in what we measure” by M. P. Silverman , W. Strange and T. C. Lispscombe (Am. J. of Physics 72(2) ,1068-1081. *American Journal of Physics,* **72** (12): 1530-1530.

17. Massad, E.; Coutinho, F. A. B.; Burattini, M. N. and **Lopez, L. F.** (2004). The Eyam plague revisited: is the village isolation change transmission from fleas to pulmonary? *Medical Hypotheses,* **63**, 911-915.

16. Massad, E.; Burattini, M. N.; Coutinho, F. A. B. and **Lopez, L. F.** (2003). Dengue and the risk of urban yellow fever reintroduction in São Paulo State, Brazil. *Revista de Saude Publica,* **37**(4):477-484.

15. Amaku, M.; Coutinho, F. A. B.; Azevedo, R. S.; Burattini, M. N.; **Lopez, L. F.**; Massad, E. (2003). Vaccination against rubella: analysis of the temporal evolution of the age-dependent force of infection and the effects of different contact paterns. *Physical Review E,* **67**(5):Art. No. 051907 Part 1**.**

14. **Lopez, L. F.**; Coutinho, F. A. B.; Burattini, M. N.; Massad, E. (2002). Threshold conditions for persistence in complex host-vectors interactions. *Comptes Rendus Biologies*, **325**:1073-1084.

13. Massad, E.; Burattini, M. N.; Coutinho, F. A. B.; **Lopez, L. F.** (2002). Which phase of the natural history of HIV infection is more transmissible? *International journal of STD and AIDS*, **13**(6):430-1**.**

12. Massad, E.; Coutinho, F. A. B.; Burattini, M. N.; Sallum, P. C.; **Lopez, L. F.** (2001). A mixed ectoparasite-microparasite model for bat-transmitted rabies. *Theoretical Population Biology*, **60**(4):265-279**.**

11. Massad, E.; Coutinho, F. A. B.; Burattini, M. N.; **Lopez, L. F.** (2001). A model independent analysis of the demographic impact of HIV/AIDS in the state of São Paulo, Brazil. *Journal of Biological Systems*, **9**(4):255-267.

10. Massad, E.; Coutinho, F. A. B.; Burattini, M. N.; **Lopez, L. F.** and Struchiner, C. J. (2001). Modelling the impact of imperfect HIV vaccines on the incidence of the infection. *Mathematical and Computer Modelling,* **34**(3-4)**:** 345-351.

9. Coutinho, F. A. B., **Lopez, L. F.**, Burattini, M. N. and Massad, E. (2001). Modelling the natural history of HIV infection in individuals and its epidemiologial implications. *Buletin of Mathematical Biology,* **63**(6)**:** 1041-1062**.**
8. Massad, E.; Coutinho, F.A.B.; Burattini, M.N.; **Lopez, L.F.** (2001). The risk of yellow fever in a dengue infested area. *Transactions of the royal society of tropical Medicine and Hygiene*, **95**(3)**:** 370-374**.**
7. **Lopez, L. F.** and Coutinho, F. A. B. (2000). On the Uniqueness of the Positive Solution of an Integral Equation which appears in Epidemiological Models. *Journal of Mathematical Biology,* **40**(3)**:** 199-228.
6. Coutinho, F. A. B., Massad, E., **Lopez, L. F.**, Burattini, M. N., Struchiner, C. J. and Azevedo-Neto, R. S. (1999). Modelling heterogeneities in individual frailties in epidemic models. *Mathematical and Computer Modelling,* **30**(1-2)**:** 97-115.
5. **Lopez, L. F.**, Coutinho, F. A. B., Burattini, M. N. and Massad, E. (1999). Modelling the spread of infections when the contact rate among individuals is short ranged: propagation of epidemic waves. *Mathematical and Computer Modelling,* **29**(7)**:** 55-69.
4. Burattini, M.N., Massad, E., Coutinho, F. A. B., Azevedo-Neto, R. S., Menezes, R. X. and **Lopez, L. F.** (1998). A mathematical model of the impact of crack-cocaine use on the prevalence of HIV/AIDS among drug users. *Mathematical and Computer Modelling,* **28(**3)**:** 21-29.
3. Burattini, M. N., Coutinho, F. A. B., **Lopez, L. F**. and Massad, E. (1998). Modelling the dynamics of leishmaniasis considering human, animal hosts and vector populations. *Journal of Biological Systems,* **6(**4)**:** 337-356.
2. **Lopez**, **L. F.** and Coutinho, F. A. B. (1998). *Erratum on* Motion of Articulated Bodies : an Application of Gauge Invariance in Classical Lagrangian Mechanics. *American Journal of Physics,* **66:** (3) 252-252.
1. **Lopez, L. F.;** Coutinho, F.A.B. (1997) Motion of articulated bodies: An application of gauge invariance in classical Lagrangian mechanics. *American Journal of Physics,* **65:** (6) 528-537.

STUDENT MENTORING

DOCTORAL DEGREE

2010 PAULO CESAR COSTA DOS SANTOS
Ph.D. in Biotechnology
Medical School of the University of São Paulo
Dissertation: Intelligent database and associated tools for HIV sequences, mutations, and resistance related to antiretroviral drugs

2009 MARCIA PEREZ RESENDE OLIVEROS
Ph.D. in Pathology
Medical School of the University of São Paulo
Dissertation: Prevalence and covariance of mutations related to resistance to protease inhibitors in HIV-1 subtype F

2008 MARCELO ROSSI
Ph.D. in Biotechnology
Dissertation: School of the University of São Paulo
Thesis: Mathematical model of immune response to HIV-1 infection

MASTER DEGREE

2017 CRISTINA GABRIELA AGUILAR LARA
M.S. in Experimental Physio-Pathology (officially starting in 2017/03)
Medical School of the University of São Paulo
Thesis: Modeling of epidemic systems using the stochastic formalism of Statistical Mechanics

2017 ELIANE M. P. CARNEIRO
M.S. in Experimental Physio-Pathology
Medical School of the University of São Paulo
Thesis: Analysis of SAGE (Serial Analysis of Gene Expression) data from normal and tumor cells.

2005 PAULO CESAR COSTA DOS SANTOS
M.S. in Biotechnology
Medical School of the University of São Paulo
Thesis: Computational tool for analysis and genomic annotation of expressed sequences generated by SAGE and differential display RT-PCR in tumors of squamous cells of head and neck.

2005 MARCIA PEREZ RESENDE OLIVEROS
M.S. in Experimental Physio-Pathology
Medical School of the University of São Paulo
Thesis: Prevalence and covariance of mutations related to resistance to protease inhibitors in HIV-1 subtype F

2004 IZABEL CRISTINA RODRIGUES DA SILVA
M.S. in Experimental Physio-Pathology
Medical School of the University of São Paulo

Thesis: Analysis of SAGE (Serial Analysis of Gene Expression) data from normal and tumor cells

PROFESSIONAL ASSOCIATIONS

- Principal Investigator of the Brazilian side of the project AmLight (America's Lightpaths), co-financed by Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP) and the US National Science Foundation(NSF)
- Member of the Research Ethics Committee of the Faculdade de Medicina da Universidade de São Paulo(FMUSP) - the Medical School of the University of São Paulo
- Member of the Board of the Núcleo de Análise Interdisciplinar de Políticas Públicas e Estratégia da Universidade de São Paulo(NAIPPE/USP, Center for Interdisciplinary Analysis of Public Policies and Strategy of the University of São Paulo. Appointed Secretary to the board for a four-year period
- Principal Investigator of the Brazilian side of the project WHREN (Western Hemisphere Research and Education Network), co-financed by FAPESP and NSF
- Principal Investigator of the project Academic Network at São Paulo (ANSP) (financed by FAPESP)
- Program Manager of FAPESP (the State of São Paulo Science Foundation) "Information Technology Program