Claudia R. Solís-Lemus

Curriculum Vitae

405 Eagle Heights D
Madison, WI, 53705
✉ claudia@stat.wisc.edu
⌂ www.stat.wisc.edu/~claudia

Education

2010–2015	**Ph.D., Statistics**, *University of Wisconsin-Madison*, Madison.
2014	**M.A., Mathematics**, *University of Wisconsin-Madison*, Madison.
2003–2008	**B.S., Applied Mathematics**, *Instituto Tecnológico Autónomo de México (ITAM)*, Mexico City, Summa cum laude.
2003–2008	**B.S., Actuarial Sciences**, *Instituto Tecnológico Autónomo de México (ITAM)*, Mexico City, Summa cum laude.

Publications

2015 **Bayesian species delimitation combining multiple genes and traits in a unified framework**, *Solís-Lemus, Claudia, Knowles, L. Lacey and Ané, Cécile*, Evolution, 2. 69, 492–507

2016 **Inferring phylogenetic networks with maximum pseudolikelihood under incomplete lineage sorting**, *Solís-Lemus, Claudia and Ané, Cécile*, PLoS Genetics 12(3): e1005896, doi:10.1371/journal.pgen.1005896, arXiv:1509.06075.

2016 **Inconsistency of species-tree methods under gene flow**, *Solís-Lemus, Claudia and Yang, Mengyao and Ane, Cecile*, Systematic Biology, doi: 10.1093/sysbio/syw030.

2016 **Statistical evidence for common ancestry: application to primates**, *Baum, D., Ané, C., Larget, B., Solís-Lemus, C., Ho, L.S.T, Boone, P., Drummond, C., Bontrager, M., Hunter, S., Saucier, B.*, Evolution, doi: 10.1111/evo.12934.

Conference papers

2016 **Crime detection via crowdsourcing**, *Pimentel-Alarcon, D. and C. Solís-Lemus*, 8th Mexican Conference on Pattern Recognition, Springer International.

Software development

2015 **PhyloNetworks**, *https://github.com/crsl4/PhyloNetworks*, Julia package for phylogenetic networks including estimation method `SNaQ`.

2014 **iBPP**, *https://github.com/cecileane/iBPP*, Bayesian species delimitation integrating genes and traits.

Research Experience

2016 **Postdoctoral research**, *NSF-supported project*, Improved Bayesian phylogenetic inference based on approximate conditional independence, PI: Bret Larget.

2014–2015 **Research assistant**, *NSF-supported project*, ATOL: Assembling a taxonomically balanced genome-scale reconstruction of the evolutionary history of the Enterobacteriaceae, PI: Nicole Perna, Bret Larget, Cécile Ané, Colin Dewey.

2013–2014 **Research assistant**, *NSF-supported project*, Reconciling gene trees: Deciphering the source and extent of genealogical discordance, PI: David Spooner, David Baum, Bret Larget, Cécile Ané, Gregory Thain.

Teaching Experience

2016 **Guest lecturer**, *Botany 563: Phylogenetic networks*, UW-Madison.

2014 **Statistics tutorial**, *PhD qualifying examination summer camp*, UW-Madison.

2012–2013 **Teaching assistant**, *Regression methods for population health*, UW-Madison, Professor Ron Gangnon.

2011–2012 **Teaching assistant**, *Introduction to Biostatistics for population health*, UW-Madison, Professor Ron Gangnon.

2011 **Teaching assistant**, *Introduction to Statistical methods*, UW-Madison, Professor Kevin Packard (Spring), Kam Wah Tsui (Summer).

2010 **Teaching assistant**, *Introduction to theory and methods of mathematical statistics I*, UW-Madison, Professor Zhengjun Zhang.

2010 **Instructor in Mathematics**, *Advanced Algebra II*, ITAM.

2010 **Instructor in Mathematics**, *Calculus II*, ITAM.

2009 **Instructor in Mathematics**, *Calculus III*, ITAM.

2009–2010 **Instructor in Actuarial Sciences**, *Actuarial Mathematics I*, ITAM.

2009–2010 **Instructor in Actuarial Sciences**, *Actuarial Mathematics III*, ITAM.

Mentoring Experience

2015 **Statistics Senior Honors Thesis**, *Inconsistency of species-tree methods under gene flow*, Mengyao Yang – University of Wisconsin-Madison.

2015 **Integrated Biological Sciences Summer Research Program**, *Visualizing inferred phylogenetic networks in Julia*, John Spaw – University of Wisconsin-Madison.

2014 **Integrated Biological Sciences Summer Research Program**, *Using quartets to estimate phylogenetic networks*, John Malloy – University of Wisconsin-Madison.

Presentations

Invited talks

2016 **Workshop on new software tools for phylogenomic analysis – Evolution meeting**, *PhyloNetworks: julia package for phylogenetic networks*.

2016 **Advances in the analysis of reticulate population networks – Evolution meeting**, *Quartet-based inference of phylogenetic networks*.

2015 **System Information Learning Optimization Seminar – UW Madison**, *Statistical inference of phylogenetic networks*.

2015 **Evolution Seminar Series – UW Madison**, *Fast reconstruction of hybridization networks from multilocus data.*

2015 **Networks seminar – UW Madison**, *Statistical inference on phylogenetic networks.*

2015 **Statistics student seminar – UW Madison**, *Statistical inference on phylogenetic networks.*

2014 **Seminario Aleatorio – ITAM**, *The role of Statistics in the inference of the Tree of Life.*

Contributed talks

2016 **8th Mexican Conference on Pattern Recognition – Guanajuato, Mexico**, *Crime detection via crowdsourcing.*

2015 **Evolutionary System Biology and Modeling Workshop – UW Madison**, *Statistical inference of phylogenetic networks.*

2015 **Bayesian Models and Inference – Contributed speed talk JSM**, *Bayesian species delimitation combining multiple genes and traits in a unified framework.*

2015 **Mathematical and Computational Evolutionary Biology Conference**, *Inferring phylogenetic networks from quartets with maximum pseudolikelihood estimation.*

2012 **Data, skewness and testing – Contributed papers JSM**, *A parametric measure of dispersion derived from the generalized mean.*
(presenter: Victor Guerrero)

2009 **XXIV Foro Nacional de Estadística**, *A parametric measure of dispersion derived from the generalized mean.*

Tutorials

2016 **Botany 563 – UW Madison**, *Small tutorial on PhyloNetworks and SNaQ.*

2015 **The hacker within series – UW Madison**, *Short introduction to Julia.*

2015 **Statistics student seminar – UW Madison**, *Short introduction to HTCondor.*

Service

Symposium organization

2016 **Evolution meeting symposium**, *Advances in the analysis of reticulate population networks*, Co-organizer: David Baum.

Fellowships and Awards

2015	Student travel support	*Society for Systematic Biologists*
2015	Vilas conference presentation funds	*UW-Madison*
2014	Advanced Computing Infrastructure Fellowship	*UW-Madison*
2012	College of Letters and Science Teaching Fellowship	*UW-Madison*
2009	Ex-ITAM Research Award in Actuarial Sciences	*ITAM*
2008	Social Responsibility Award	*ITAM*
2003	Academic Excellence Scholarship	*ITAM*

Languages

Spanish	Native language
English	Proficient level: TOEFL iBT (2009), IELTS (2009)
French	Advanced level: DALF C1 (2007)
Portuguese	Advanced level: CELPE-BRAS (2008)
German	Beginner level: A1 Start Deutsch 1 (2008)

Computer skills

Programming	C++, Java, Julia, Perl, Python
Statistics	R, SAS, SPSS
Mathematics	Matlab, Mathematica, Macaulay2

Certifications

Exam C	Society of Actuaries (SOA)	*Construction of Actuarial Models Certificate*
Exam FM	Society of Actuaries (SOA)	*Financial Mathematics Certificate*
Exam P	Society of Actuaries (SOA)	*Probability Certificate*