

Timothy M. Beissinger

CONTACT INFORMATION	Department of Plant Sciences University of California, Davis Davis, CA 95616	(608) 320-1913 beissinger@ucdavis.edu
EDUCATION	The University of Wisconsin at Madison , Madison, Wisconsin USA	
	Ph.D., Statistical and Quantitative Genetics	May 2014
	Departments: Agronomy and Animal Science Advisors: Professors Natalia de Leon and Daniel Gianola	
	M.S., Statistics	May 2011
	B.S., Mathematics and Geography	May 2009
EMPLOYMENT	Postdoctoral Research Associate Mentored by Professor Jeff Ross-Ibarra Department of Plant Sciences University of California, Davis	June 2014 - Present
	Visiting Scientist Mentored by Professor Henner Simianer Department of Animal Breeding and Genetics Georg-August Universität, Göttingen, Germany	Jan - Apr 2014
	Research Assistant Department of Agronomy University of Wisconsin, Madison	2009 - 2014
PUBLICATIONS	Beissinger, T.M. , Gholami, M., Erbe, M., Weigend, S., Weigend, A., de Leon, N., Gianola, D., Simianer, H. Using the variability of linkage disequilibrium between subpopulations to scan for selection in a diverse panel of chickens. <i>Submitted</i> .	
	Beissinger, T.M. , Rosa, J.G.M., Kaeppler, S.M., de Leon, N., Gianola, D. Defining window-boundaries for genomic analyses using smoothing spline techniques. <i>Genetics Selection Evolution. In Press</i> .	
	Lorenz, A. J., Beissinger, T.M. , Rodrigues, R., de Leon, N. Selection for silage yield and composition did not affect genomic diversity within the Wisconsin Quality Synthetic maize population. <i>Genes Genomes Genetics</i> . DOI: 10.1534/g3.114.015263.	
	Foerster, J.M., Beissinger, T.M. , de Leon, N., Kaeppler, S.M. 2015. Large effect QTL explain natural phenotypic variation for the developmental timing of vegetative phase change in maize (<i>Zea mays L.</i>). <i>Theoretical and Applied Genetics</i> . DOI: 10.1007/s00122-014-2451-3.	
	Beissinger, T.M. , Hirsch, C.N., Vaillancourt, B., Deshpande, S., Barry, K., Buell, C. R., Kaeppler, S. M., Gianola, D., de Leon, N. 2014. A genome-wide scan for evidence of selection in a maize population under long-term artificial selection for ear number. <i>Genetics</i> . 196(3): 829-840.	

Hirsch, C.N., Flint-Garcia, S.A., **Beissinger, T.M.**, Eichten, S.R., Deshpande, S., Barry, K., Springer, N.M., Buell, C.R., de Leon, N., Kappler, S.M. 2014. Insights into the effects of long-term artificial selection on seed size in maize. *Genetics*. 198(1): 409-421.

***Beissinger, T.M.**, Hirsch, C.N., Sekhon, R.S., Foerster, J.M., Johnson, J.M., Muttoni, G., Vaillancourt, B., Buell, C.R., Kaeppler, S.M., de Leon, N. 2013. Marker density and read-depth for genotyping populations using genotyping-by-sequencing. *Genetics*. 193: 1073-1081.

* Selected as a highlighted article by the editorial board.

Wu, X., Chuanyu, S., **Beissinger, T.M.**, Rosa, G., Weigel, K., de Leon, N., Gianola, D. 2012. Parallel Markov chain Monte Carlo - bridging the gap to high performance Bayesian computation in animal breeding and genetics. *Genet Sel Evol*. 44:29.

Wu, X., **Beissinger, T.M.**, Bauck, S., Woodward, B., Rosa, G., Weigel, K., de Leon, N., Gianola, D. 2011. A primer on high-throughput computing for genomic selection. *Frontiers in Genetics*. 2, 4.

SOFTWARE

GenWin: Spline Based Window Boundaries for Genomic Analyses

An R package for analyzing genetic data across distinct bins.

<http://cran.r-project.org/web/packages/GenWin/index.html>

GRANTS

2012, University of Wisconsin Graduate School. Awarded one year of funding and supplies to support dissertation research.

2012, DuPont-Pioneer and UW Associated Students of Madison. Co-authored grant to support the first University of Wisconsin Plant Sciences Symposium.

2011, DuPont-Pioneer. Awarded funding to genotyping 240 samples with the Pioneer Public SNP array.

CONFERENCE, WEBINAR, AND DEPARTMENTAL PRESENTATIONS

Invited

Beissinger, T., Wang, L., Durvasula, A., Crosby, K., Hufford, M., and Ross-Ibarra, J. [57th Annual Maize Genetics Conference](#)
March, 2015

Beissinger, T. [Plant and Animal Genome Conference 23](#)
Genomic selection and genome-wide association studies workshop
January 2015

Beissinger, T. [Department of Animal Science, University of California, Davis](#)
August, 2014

Beissinger, T. [Department of Animal Breeding and Genetics, Georg-August Universität](#)
February 2014

Beissinger, T. [Center of Life and Food Sciences, Technische Universität München](#)

April 2014

Beissinger, T. [Animal Science Department, University of Nebraska, Lincoln](#)
December, 2013

Beissinger, T., Hirsch, C., Buell, R.C., Kaeppler, S., Gianola, D., de Leon, N. Gordon
Research Seminar in Quantitative Genetics and Genomics. Galveston, TX, February,
2013.

Contributed

Beissinger, T. Bay Area Population Genomics Meeting XI. Davis, CA, December,
2014.

Beissinger, T. Corn Breeding Webinar Series, hosted by Dr. Rex Bernardo at the
University of Minnesota. December, 2012.

Beissinger, T., Hansey, C., Sekhon, R., Vaillancourt, B., Buell, C.R., Kaeppler, S.,
de Leon, N. North Central Regional Corn Breeding Research Meeting. Portland,
OR, March, 2012.

POSTER
ABSTRACTS

Beissinger, T. and Ross Ibarra, J. [Plant and Animal Genome Conference 23](#). San
Diego, CA, January 10-14, 2015.

Beissinger, T., Gianola, D., de Leon, N. Impact of Large-Scale Genomic Data on
Statistical and Quantitative Genetics Conference. Seattle, WA, November 23-26,
2013.

Beissinger, T., Hirsch, C., Vaillancourt, B., Buell, R.C., Kaeppler, S., Gianola, D.,
de Leon, N. Maize Genetics Conference. St. Charles, IL, March 14-17, 2013.

Beissinger, T., Hirsch, C., Buell, R.C., Kaeppler, S., Gianola, D., de Leon, N. Gordon
Research Seminar in Quantitative Genetics and Genomics. Galveston, TX, February
16-17, 2013.

Beissinger, T., Hansey, C., Foerster, J., Sekhon, R., Johnson, J., Muttoni, G., Vail-
lancourt, B., Buell, C.R., Kaeppler, S., de Leon, N. Maize Genetics Conference.
Portland, OR, March 15-18, 2012.

Beissinger, T., de Leon, N., Kaeppler, S. Maize Genetics Conference. St Charles,
IL, March 17-20, 2011.

TEACHING
EXPERIENCE

Co-instructor

Introduction to Linux and High Throughput Computing Fall 2010
[University of Wisconsin, Madison Department of Animal Sciences](#)

Teaching assistant

Biometrical Procedures in Plant Breeding Fall 2011, 2013
[University of Wisconsin, Madison Department of Agronomy](#)

Experimental Design Spring 2013
[University of Wisconsin, Madison Department of Agronomy](#)

	Advanced Plant Breeding University of Wisconsin, Madison Department of Agronomy	Spring 2012
	Tutoring	
	Statistics Advanced Placement Statistics	Fall 2010 - Spring 2011
	Calculus Advanced Placement Calculus AB	Fall 2006- Spring 2007
REVIEWED FOR	PeerJ BMC Evolutionary Biology	
AWARDS AND SCHOLARSHIPS	Monsanto fellowship recipient Scholarship to attend Summer Institute in Statistical Genetics University of Washington, Seattle Scholarship to attend TeraGrid Conference Pittsburgh, PA Scholarship to attend Open Science Grid Summer School Madison, WI Undergraduate deans list Susan B. Hotchkiss memorial scholarship	2009-2014 2012 2010 2010 All semesters 2007-2009 2005
ACADEMIC AND PROFESSIONAL DEVELOPMENT	Monsanto Fellows Professional Development Program 17th Summer Institute in Statistical Genetics Monsanto Fellows Professional Development Program Monsanto Fellows Professional Development Program Monsanto Fellows Professional Development Program University of Wisconsin Plant Breeding Internship	September 2012 July 2012 September 2011 September 2010 September 2009 Summer 2008
LANGUAGES	English: Mother tongue Spansih: Basic abilities	
COMPUTER ABILITIES	Software R, Linux/Unix, SAS, Latex, Condor, Java, Perl Linux workstation system administrator Participated in Open Science Grid Summer School	2010 - 2014 July 2010
STATISTICAL EXPERTISE	Bayesian analysis, estimation of functions from data, mixed models, mathematical statistics, statistical inference, linear regression and analysis of variance	
MATHEMATICAL EXPERTISE	Real and complex analysis, combinatorics, topology, number theory, modern algebra, cellular automata	