## John Novembre

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## Education

## BA, Biochemistry, The Colorado College

Advisor: Ralph Bertrand-Garcia 1996-2000

#### PhD, University of California-Berkeley

Integrative Biology with Designated emphasis in Computational Biology/Genomics

Dissertation: Statistical methods for neutral and adaptive genetic variation in continuous isolation-by-distance models

Advisor: Montgomery Slatkin 2000-2006

## Postdoctoral training, University of Chicago

#### **Department of Human Genetics**

Advisor: Matthew Stephens 2006-2008

## **Academic Appointments**

## <u>University of California–Los Angeles</u>

## Department of Ecology & Evolution

Assistant Professor	2008-2013
Associate Professor	2012-2013

## University of Chicago

## Department of Human Genetics (primary), Department of Ecology & Evolution (secondary)

Associate Professor		2013-2017
Professor		2017-

#### **Honors**

Boettcher Scholar	1996-2000
Stanford University Summer Research Fellowship (lab of R. Baldwin)	1998
Alberts Summer Research Prize (to visit lab of L. Excoffier, Univ. of Geneva)	1999
Outstanding Research Presentation, West Coast Biological Sciences Undergraduate Conference	1999
Rhodes Scholar Finalist	1999
American Institute of Chemists Award in Biochemistry, Phi Betta Kappa	2000
J. Juan Reid Award for extracurricular and scholastic achievement,	2000
Howard Hughes Medical Institute Predoctoral Fellow	2001-2006
NSF-EAPSI Japanese Society for the Promotion of Science Summer Fellow	2005
National Science Foundation Postdoctoral Fellow in Bioinformatics	2006-2008
Searle Scholar	2009-2012
Distinguished Faculty Teaching Award, Dept of Ecology and Evolutionary Biology, UCLA	2011
Alfred P. Sloan Research Fellow	2012-2014

NAS-Kavli Frontiers of Science Fellow	2016
Honorary doctoral degree, The Colorado College	2016
New York Times "18 Memorable People We Met Across the Country in 2018"	2018
MacArthur Fellow	2015-2020

#### **Publications**

Notation: \* indicates authors contributed equally

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### Research papers

- 1. Excoffier L, Novembre J, Schneider, S. (2000) SIMCOAL: a general coalescent program for simulation of molecular data in interconnected populations with arbitrary demography. Journal of Heredity 91:506-509.
- 2. Novembre J. (2002) Accounting for background nucleotide composition when measuring codon usage bias. Molecular Biology and Evolution 19(8):1390-1394.
- 3. Anderson EC, Novembre J. (2003) Finding haplotype block boundaries using the minimum description length principle. American Journal of Human Genetics 73(2):336-354.
- 4. Galvani AP, Novembre J. (2005) The evolutionary history of the CCR5-Delta32 HIV-resistance mutation. Microbes and Infection 7:302-309.
- 5. Novembre J, Galvani, AP, Slatkin, M. (2005) The geographic spread of the CCR5-Delta32 HIV-resistance mutation. PLoS Biology 3(11):e397.
- 6. Rosenblum EB, Novembre J. (2007) Ascertainment bias in spatially structured populations: a case study in the eastern fence lizard. Heredity 98:331-336.
- 7. Novembre J, Stephens M. (2008) Interpreting principal components analyses of spatial population genetic variation. Nature Genetics 40:646-649 [recommended by Faculty of 1000, featured in News & Views].
- 8. Novembre J, Johnson T, Bryc K, Kutalik Z, Boyko AR, Auton A, Indap A, King KS, Bergman S, Nelson MR, Stephens M, Bustamante CD. (2008) Genes mirror geography within Europe. Nature 456: 98-101.
- 9. Novembre J, Slatkin M. (2009) Likelihood-based inference in isolation-by-distance models using the spatial distribution of low-frequency alleles. Evolution 63:2914-2925.
- 10. Alexander DH, Novembre J, Lange K. (2009) Fast model-based estimation of ancestry in unrelated individuals. Genome Research 19:1655-1664.
- 11. Coop G, Pickrell JK, Novembre J, Kudaravalli S, Li J, Absher D, Myers RM, Cavalli-Sforza LL, Feldman MW, Pritchard JK. (2009) The role of geography in human adaptation. PloS Genetics 5:e1000500.
- 12. Auton A, Bryc K, Boyko AR, Lohmueller KE, Novembre J, Reynolds A, Indap A, Wright MH, Degenhardt JD, Gutenkunst RN, King KS, Nelson MR, Bustamante CD. (2009) Global distribution of genomic diversity underscores rich complex history of continental human populations. Genome Research 19:795-803.
- 13. Pickrell JK, Coop G, Novembre J, Kudaravalli S, Li JZ, Absher D, Srinivasan BS, Barsh GS, Myers RM, Feldman MW, Pritchard JK. (2009) Signals of recent positive selection in a worldwide sample of human populations. Genome Research 19:826-837.
- 14. Royal CD, Novembre J, Fullerton SM, Goldstein DB, Long JC, Bamshad MJ, Clark AG. (2010). Inferring Genetic Ancestry: Opportunities, Challenges, and Implications. American Journal of Human Genetics 14:661-673.

- 15. Francois O, Currat M, Ray, N, Han E, Excoffier L, Novembre J. (2010). Principal component analysis under population genetic models of range expansion and admixture. Molecular Biology and Evolution 27:1257-1268.
- 16. vonHoldt B, Lohmueller K, Han E, Pollinger J, Parker HG, Quignon P, Degenhardt JD, Boyko AR, Earl DE, Auton A, Reynolds A, Bryc K, Brisin A, Knowles J, Mosher DS, Spady TC, Elkahloun A, Geffen E, Pilot M, Jderzejewski W, Greco C, Randi E, Bannasch D, Wilton A, Shearman J, Cargill M, Jones PG, Qian Z, Huang W, Ding Z, Zhang Y, Bustamante CD, Ostrander EA, Novembre J, Wayne RK. (2010). Genome-wide SNP and haplotype analyses reveal a rich history underlying dog domestication. Nature 464:898-902.
- 17. Wegmann D, Kessner D, Veeramah KR, Mathias RA, Nicolae DL, Yanek LR, Sun YV, Torgerson DG, Rafaels N, Mosely T, Becker LC, Ruczinski I, Beaty TH, Kardia SLR, Meyers D, Barnes KC, Becker DM, Freimer N, Novembre J. (2011). Recombination rates in admixed individuals revealed by ancestry–based inference. Nature Genetics 43:847-853. [featured in News & Views]
- 18. vonHoldt BM, Pollinger JP, Earl DA, Knowles JC, Boyko AR, Parker H, Geffen E, Pilot M, Jedrzejewski W, Jedrzejewska B, Sidorovich V, Greco C, Randi E, Musiani M, Kays R, Bustamante CD, Ostrander EA, Novembre J, Wayne RK. (2011) A genome-wide perspective on the evolutionary history of enigmatic wolf-like canids. Genome Research 21:1294-12305.
- 19. Nelson MR\*, Wegmann D\*, Ehm MG, Kessner D, St. Jean P, Verzili C, Shen J, Tang Z, Bacanu SA, Fraser D, Warren L, Aponte J, Zawistowski M, Liu X, Zhang H, Zhang Y, Li J, Li Y, Li L, Woolard P, Topp S, Hall MD, Nangle K, Wang J, Abecasis G, Zöllner S, Cardon LR, Whittaker JC, Chissoe SL, Novembre J\*, Mooser V\* (2012). An abundance of rare variants in 202 drug target genes sequenced in 14,002 people. Science 337:100-104.
- 20. Yang W, Novembre J, Eskin E, Halperin E. (2012) A model-based approach for analysis of spatial structure in genetic data. Nature Genetics 44:725-731.
- 21. Schaibley VM, Zawistowski M, Wegmann D, Ehm MG, Nelson MR, St Jean PL, Abecasis GR, Novembre J, Zöllner S, Li JZ. (2013). The influence of genomic context on mutation patterns in the human genome inferred from rare variants. Genome Research 23(12):1974-84.
- 22. Kessner D, Turner TL, Novembre J. (2013). Maximum Likelihood Estimation of Frequencies of Known Haplotypes from Pooled Sequence Data. Molecular Biology and Evolution 30:1145-1158.
- 23. Rundel C, Wunder M, Alvarado A, Ruegg K, Harrigan R, Schuh A, Kelly J, Siegel R, DeSante D, Smith TB, Novembre J. (2013). Novel statistical methods for integrating genetic and stable isotopic data to infer individual-level migratory connectivity. Molecular Ecology 22:4163-4176.
- 24. Han E, Sinsheimer JS, Novembre J. (2013). Characterizing bias in population genetic inferences from low coverage sequencing data. Molecular Biology and Evolution. 31:723-735.
- 25. Kessner D, Novembre J. (2014). forqs: forward-in-time simulation of recombination, quantitative traits and selection. Bioinformatics 30:576-7.
- 26. Freedman AH, Gronau I, Schweizer RM, Ortega-Del Vecchyo D, Han E, Silva PM, Galaverni M, Fan Z, Marx P, Lorente-Galdos B, Beale H, Ramirez O, Hormozdiari F, Alkan C, Vilà C, Squire K, Geffen E, Kusak J, Boyko AR, Parker HG, Lee C, Tadigotla V, Siepel A, Bustamante CD, Harkins TT, Nelson SF, Ostrander EA, Marques-Bonet T, Wayne RK, Novembre J. (2014) Genome sequencing highlights the dynamic early history of dogs. PLoS Genet 10(1):e1004016
- 27. Zawistowski M, Reppell M, Wegmann D, St Jean PL, Ehm MG, Nelson MR, Novembre J, Zöllner S. (2014). Analysis of rare variant population structure in Europeans explains differential stratification of gene-based tests. Eur J Hum Genet 22:1137-44.
- 28. Olalde I, Allentoft ME, Sánchez-Quinto F, Santpere G, Chiang CWK, Degiorgio M, Prado-Martinez J, Rodríguez JA, Rasmussen S, Quilez J, Ramírez O, Marigorta UM, Fernández-Callejo M, Prada ME, Encinas JM, Nielsen R, Netea MG, Novembre J, Sturm RA, Sabeti P, Marquès-Bonet T, Navarro A, Willerslev E, Lalueza-Fox C. (2014). Derived immune and ancestral pigmentation alleles in a 7,000-year-old Mesolithic European. Nature 13:225-8.

- 29. Rañola JM, Novembre J, Lange K. (2014). Fast spatial ancestry via flexible allele frequency surfaces. Bioinformatics 30 (20), 2915-2922
- 30. Yang, WY, Platt A, Chiang CWK, Eskin E, Novembre J, Pasaniuc B (2014). Spatial Localization of Recent Ancestors for Admixed Individuals. G3 4:2505-18
- 31. Han E, Sisheimer J, Novembre J (2015). Fast and accurate Site Frequency Spectrum Estimation from Low Coverage Sequence Data. Bioinformatics 31:720-7.
- 32. Kessner D, Novembre J. (2015) Power analysis of artificial selection experiments using efficient whole genome simulation of quantitative traits. Genetics 199:991-1005.
- 33. Sidore C, Busonero F, Maschio A, Porcu E, Naitza S, Zoledziewska M, Mulas A, Pistis G, Steri M, Danjou F, Kwong A, Ortega Del Vecchyo D, Chiang CW, Bragg-Gresham J, Pitzalis M, Nagaraja R, Tarrier B, Brennan C, Uzzau S, Fuchsberger C, Atzeni R, Reinier F, Berutti R, Huang J, Timpson NJ, Toniolo D, Gasparini P, Malerba G, Dedoussis G, Zeggini E, Soranzo N, Jones C, Lyons R, Angius A, Kang HM, Novembre J, Sanna S, Schlessinger D, Cucca F, Abecasis GR. (2015) Genome sequencing elucidates Sardinian genetic architecture and augments association analyses for lipid and blood inflammatory markers. Nature Genetics 47:1272-81.
- 34. Zoledziewska M\*, Sidore C\*, Chiang CWK\*, Sanna S, Mulas A, Steri M, Busonero F, Marcus JH, Marongiu M, Maschio A, Ortega Del Vecchyo D, Floris M, Meloni A, Delitala A, Concas MP, Murgia F, Biino G, Vaccargiu S, Nagaraja R, Lohmueller KE, UK10K consortium, Timpson NJ, Soranzo N, Tachmazidou I Dedoussis G, Zeggini E, The Understanding Society Scientific Group, Uzzau S, Jones C, Lyons R, Angius A, Abecasis GR\*, Novembre J\*, Schlessinger D\*, Cucca F\*. (2015) Height-reducing variants and selection for short stature on the island of Sardinia. Nature Genetics 47:1352-6. [with Sidore et al, featured in News & Views]
- 35. Petkova D, Novembre J, Stephens M. (2016) Visualizing spatial population structure with estimated effective migration surfaces. Nature Genetics 48:94-100.
- 36. Chiang CWK, Ralph P, Novembre J. (2016) Conflations of short IBD blocks can bias inferred length of IBD. G3 doi: 10.1534/g3.116.027581.
- 37. Freedman AH, Schweizer RM, Ortega-Del Vecchyo D, Han E, Davis BW, Gronau I, Silva PM, Galaverni M, Fan Z, Marx P, Lorente-Galdos B, Ramirez O, Hormozdiari F, Alkan C, Vilà C, Squire K, Geffen E, Kusak J, Boyko AR, Parker HG, Lee C, Tadigotla V, Siepel A, Bustamante CD, Harkins TT, Nelson SF, Marques-Bonet T, Ostrander EA, Wayne RK, Novembre J. (2016) Demographically-Based Evaluation of Genomic Regions under Selection in Domestic Dogs. PLoS Genetics 12:e1005851.
- 38. Schweizer RM, vonHoldt BM, Harrigan R, Knowles JC, Musiani M, Coltman D, Novembre J, Wayne RK. (2016) Genetic subdivision and candidate genes under selection in North American grey wolves. Molecular Ecology 25:380-402.
- 39. Schweizer RM, Robinson J, Harrigan R, Silva P, Galverni M, Musiani M, Green RE, Novembre J, Wayne RK (2016). Targeted capture and resequencing of 1040 genes reveal environmentally driven functional variation in gray wolves. Molecular Ecology 25:357-379.
- 40. de Manuel M, Kuhlwilm M, Frandsen P, Sousa VC, Desai T, Prado-Martinez J, Hernandez-Rodriguez J, Dupanloup I, Lao O, Hallast P, Schmidt JM, Heredia-Genestar JM, Benazzo A, Barbujani G, Peter BM, Kuderna LF, Casals F, Angedakin S, Arandjelovic M, Boesch C, Kühl H, Vigilant L, Langergraber K, Novembre J, Gut M, Gut I, Navarro A, Carlsen F, Andrés AM, Siegismund HR, Scally A, Excoffier L, Tyler-Smith C, Castellano S, Xue Y, Hvilsom C, Marques-Bonet T. (2016). Chimpanzee genomic diversity reveals ancient admixture with bonobos. Science 354:477-481.
- 41. Marcus JH, Novembre J (2017) Visualizing the Geography of Genetic Variants. Bioinformatics 33(4):594-595.
- 42. Koch E, Novembre J (2017) A Temporal Perspective on the Interplay of Demography and Selection on Deleterious Variation in Humans. G3 7(3):1027-1037.

- 43. Steri M, Orrù V, Idda ML, Pitzalis M, Pala M, Zara I, Sidore C, Faà V, Floris M, Deiana M, Asunis I, Porcu E, Mulas A, Piras MG, Lobina M, Lai S, Marongiu M, Serra V, Marongiu M, Sole G, Busonero F, Maschio A, Cusano R, Cuccuru G, Deidda F, Poddie F, Farina G, Dei M, Virdis F, Olla S, Satta MA, Pani M, Delitala A, Cocco E, Frau J, Coghe G, Lorefice L, Fenu G, Ferrigno P, Ban M, Barizzone N, Leone M, Guerini FR, Piga M, Firinu D, Kockum I, Lima Bomfim I, Olsson T, Alfredsson L, Suarez A, Carreira PE, Castillo-Palma MJ, Marcus JH, Congia M, Angius A, Melis M, Gonzalez A, Alarcón Riquelme ME, da Silva BM, Marchini M, Danieli MG, Del Giacco S, Mathieu A, Pani A, Montgomery SB, Rosati G, Hillert J, Sawcer S, D'Alfonso S, Todd JA, Novembre J, Abecasis GR, Whalen MB, Marrosu MG, Meloni A, Sanna S, Gorospe M, Schlessinger D, Fiorillo E, Zoledziewska M, Cucca F. (2017) Overexpression of the Cytokine BAFF and Autoimmunity Risk. New England Journal of Medicine 376(17):1615-1626.
- 44. Jeong C, Peter BM, Basnyat B, Neupane M, Beall CM, Childs G, Craig SR, Novembre J, Di Rienzo A. (2017) A longitudinal cline characterizes the genetic structure of human populations in the Tibetan plateau. PLoS One 12(4):e0175885.
- 45. Smith J, Coop G, Stephens M, Novembre J. (2018) Estimating Time to the Common Ancestor for a Beneficial Allele. Mol Biol Evol. 35(4):1003-1017.
- 46. Reppell M, Novembre J. (2018) Using pseudoalignment and base quality to accurately quantify microbial community composition. PLoS Comput Biol. 14(4):e1006096.
- 47. Chiang CWK, Marcus JH, Sidore C, Biddanda A, Al-Asadi H, Zoledziewska M, Pitzalis M, Busonero F, Maschio A, Pistis G, Steri M, Angius A, Lohmueller KE, Abecasis GR, Schlessinger D, Cucca F, Novembre J. (2018) Genomic history of the Sardinian population. Nature Genetics 50:1426-1434
- 48. Schweizer RM, Durvasula A, Smith J, Vohr SH, Stahler DR, Galaverni M, Thalmann O, Smith DW, Randi E, Ostrander EA, Green RE, Lohmueller KE, Novembre J, Wayne RK. (2018) Natural Selection and Origin of a Melanistic Allele in North American Gray Wolves. Mol Biol Evol. 5(5):1190-1209.
- 49. de Barros Damgaard P, Martiniano R, Kamm J, Moreno-Mayar JV, Kroonen G, Peyrot M, Barjamovic G, Rasmussen S, Zacho C, Baimukhanov N, Zaibert V, Merz V, Biddanda A, Merz I, Loman V, Evdokimov V, Usmanova E, Hemphill B, Seguin-Orlando A, Yediay FE, Ullah I, Sjögren KG, Iversen KH, Choin J, de la Fuente C, Ilardo M, Schroeder H, Moiseyev V, Gromov A, Polyakov A, Omura S, Senyurt SY, Ahmad H, McKenzie C, Margaryan A, Hameed A, Samad A, Gul N, Khokhar MH, Goriunova OI, Bazaliiskii VI, Novembre J, Weber AW, Orlando L, Allentoft ME, Nielsen R, Kristiansen K, Sikora M, Outram AK, Durbin R, Willerslev E. (2018) The first horse herders and the impact of early Bronze Age steppe expansions into Asia. Science. 2018 360(6396).
- 50. Jeong C, Witonsky DB, Basnyat B, Neupane M, Beall CM, Childs G, Craig SR, Novembre J, Di Rienzo A. (2018) Detecting past and ongoing natural selection among ethnically Tibetan women at high altitude in Nepal. PLoS Genet. 14(9):e1007650.
- 51. Lindo J, Haas R, Hofman C, Apata M, Moraga M, Verdugo RA, Watson JT, Viviano Llave C, Witonsky D, Beall C, Warinner C, Novembre J, Aldenderfer M, Di Rienzo A. (2018) The genetic prehistory of the Andean highlands 7000 years BP though European contact. Sci Adv. 4(11):4921
- 52. Al-Asadi H, Petkova D, Stephens M, Novembre J. (2019) Estimating recent migration and population-size surfaces. PLoS Genet. 15(1):e1007908
- 53. Al-Asadi H, Dey KK, Novembre J, Stephens M. (2019) Inference and visualization of DNA damage patterns using a grade of membership model. Bioinformatics 35:1292-1298
- 54. Koch E\*, Schweizer RM\*, Schweizer TM, Stahler DR, Smith DW, Wayne RK, Novembre J. (2019) De novo mutation rate estimation in wolves of known pedigree. Mol Biol Evol. 36:2536-2547
- 55. Dickson BG, Albano CM, Anantharaman R, Beier P, Fargione J, Graves TA, Gray ME, Hall KR, Lawler JJ, Leonard PB, Littlefield CE, McClure ML, Novembre J, Schloss CA, Schumaker NH, Shah VB, Theobald DM. (2019) Circuit-theory applications to connectivity science and conservation. Conserv Biol. 2019 Apr;33(2):239-249.

- 56. Marcus JH\*, Posth C\*, Ringbauer H\*, Lai L, Skeates R, Sidore C, Beckett J, Furtwängler A, Olivieri A, Chiang CWK, Al-Asadi H, Dey K, Joseph TA, Liu CC, Der Sarkissian C, Radzevičiūtė R, Michel M, Gradoli MG, Marongiu P, Rubino S, Mazzarello V, Rovina D, La Fragola A, Serra RM, Bandiera P, Bianucci R, Pompianu E, Murgia C, Guirguis M, Orquin RP, Tuross N, van Dommelen P, Haak W, Reich D, Schlessinger D, Cucca F, Krause J, Novembre J. (2020) Genetic history from the Middle Neolithic to present on the Mediterranean island of Sardinia. Nat Commun. Feb 24;11(1):939. doi: 10.1038/s41467-020-14523-6.
- 57. Peter BM, Petkova D, Novembre J. (2020) Genetic landscapes reveal how human genetic diversity aligns with geography. Mol Biol Evol. 37:943-951
- 58. Biddanda A, Rice DP, Novembre J. (2020). A variant-centric perspective on geographic patterns of human allele frequency variation. eLife. 9:e60107
- 59. Marcus J, Ha W, Barber RF, Novembre J. (2021). Fast and flexible estimation of effective migration surfaces. eLife. 10:e61927.
- 60. Ringbauer H, Novembre J, Steinrücken M. (2021). Parental relatedness through time revealed by runs of homozygosity in ancient DNA. Nature Communications. 12(1), 1-11.
- 61. Zhang S, Johnson RA, Novembre J, Freeland E, Conley D. (2021). Public attitudes toward genetic risk scoring in medicine and beyond. Social Science & Medicine. 274, 113796.
- 62. Spangenberg L, Fariello MI, Arce D, Illanes G, Greif G, Shin JY, Yoo SK, Seo JS, Robello C, Kim C, Novembre J, Sans M, Naya H. (2021) Indigenous Ancestry and Admixture in the Uruguayan Population. Front Genet. 12:733195
- 63. Ortega-Del Vecchyo D, Lohmueller KE, Novembre J. (2022) Haplotype-based inference of the distribution of fitness effects. Genetics, 220:iyac002.
- 64. Biddanda, A, Steinrücken, M, & Novembre, J. (2022). Properties of 2-locus genealogies and linkage disequilibrium in temporally structured samples. Genetics, *221*(1).
- 65. Liu CC, Witonsky D, Gosling A, Lee JH, Ringbauer H, Hagan R, Patel N, Stahl R, Novembre J, Aldenderfer M, Warriner C, Di Rienz A, Jeong C. (2022). Ancient genomes from the Himalayas illuminate the genetic history of Tibetans and their Tibeto-Burman speaking neighbors. Nature Communications, 13(1), 1-14.
- 66. Muktupavela RA, Petr M, Ségurel L, Korneliussen T, Novembre J, & Racimo F. (2022). Modeling the spatiotemporal spread of beneficial alleles using ancient genomes. Elife, 11, e73767.
- 67. Skeen HR, Willard DE, Jones AW, Winger BM, Gyllenhaal EF, Tsuru BR, Hackett SJ, and Novembre J. (2023). Intestinal microbiota of Nearctic-Neotropical migratory birds vary more over seasons and years than between host species. Molecular Ecology, 32:3290-3307.
- 68. Cotter DJ, Hofgard EF, Novembre J, Szpiech ZA, & Rosenberg NA. (2023). A rarefaction approach for measuring population differences in rare and common variation. Genetics, *224*(2), iyad070.
- 69. Sohail M, Palma-Martínez MJ, Chong AY, Quinto-Cortés CD, Barberena-Jonas C, Medina-Muñoz S G, ..., Novembre J, Garcia-Garca L & Moreno-Estrada A. (2023). Mexican Biobank advances population and medical genomics of diverse ancestries. Nature, *622*(7984), 775-783.

## Perspectives and Literature reviews:

- 70. Novembre J, Di Rienzo A. (2009) Spatial patterns of variation due to natural selection in humans. Nature Reviews Genetics 10:745-755.
- 71. Novembre J\*, Ramachandran S\*. (2011) Perspectives on Human Population Structure at the Cusp of the Sequencing Era. Annual Review of Genomics and Human Genetics 12:245-274.
- 72. Novembre J, E Han. (2012) Human population structure and the adaptive response to pathogen-induced selection pressures. Philos Trans R Soc Lond B Biol Sci. 367(1590):878-86.
- 73. Novembre J. (2012) Commentary on Sokal, Oden, and Thomson's "a problem with synthetic maps (1999)". Hum Biol 84:623-6.

- 74. Veeramah KR, Novembre J. (2014). Demographic Events and Evolutionary Forces Shaping European Genetic Diversity. In: Chakravarati, A (2014) Human Variation: A Genetic Perspective on Diversity, Race, and Medicine. Cold Spring Harbor Press. Also published in: Cold Spring Harb Perspect Biol. 6(9).
- 75. Novembre J (2014). Variations on a Common STRUCTURE: New Algorithms for a Valuable Model. Genetics 197(3):809-811.
- 76. Novembre J (2015). Human Evolution: ancient DNA steps into the language debate. Nature (New and Views) 11:164-165.
- 77. Novembre J. (2016) Pritchard, Stephens, and Donnelly on Population Structure. Genetics 204(2):391-393.
- 78. Novembre J, Peter B (2016). Recent advances in the study of fine-scale population structure in humans. Current Opinion in Genetics and Development 41:98-105.
- 79. Novembre J, Barton NH. (2018) Tread Lightly Interpreting Polygenic Tests of Selection. Genetics. 2018 Apr;208(4):1351-1355.
- 80. Novembre J, Beier P, Fargione J, Lawler J, Selkoe K. (2018) Scientific obituary: Brad McRae (1966-2017). Mol Ecol. Aug;27(15):3035-3036.
- 81. Liu CC, Shringarpure S, Lange K, Novembre J. (2020) Exploring Population Structure with Admixture Models and Principal Component Analysis. Methods Mol Biol. 2090:67-86
- 82. Lewis AC, Molina SJ, Appelbaum PS, Dauda B, Di Rienzo A, Fuentes A, Fullerton SM, Garrison NA, Ghosh N, Hammonds EM, Jones DS. (2022) Getting genetic ancestry right for science and society. Science. 376(6590):250-2.
- 83. Novembre, J. (2022). The background and legacy of Lewontin's apportionment of human genetic diversity. Philosophical Transactions of the Royal Society B, *377*(1852), 20200406.
- 84. Novembre, J., Stein, C., Asgari, S., Gonzaga-Jauregui, C., Landstrom, A., Lemke, A., ... & Tishkoff, S. (2022). Addressing the challenges of polygenic scores in human genetic research. The American Journal of Human Genetics, 109(12), 2095-2100.
- 85. Steiner, M. C., & Novembre, J. (2022). Population genetic models for the spatial spread of adaptive variants: A review in light of SARS-CoV-2 evolution. PLoS Genetics, 18(9), e1010391.
- 86. Gloss, A. D., Steiner, M. C., Novembre, J., & Bergelson, J. (2023). The design of mapping populations: Impacts of geographic scale on genetic architecture and mapping efficacy for defense and immunity. Current Opinion in Plant Biology, 74, 102399.

#### Other:

- 87. Novembre J, Witonsky D, Di Rienzo A. (2016) Technical Report: Assessment of the genetic analysis of Rasmussen et al. (2015). Report provided to the U.S. Army Corps of Engineers, St. Louis District and available from: <a href="http://cdm16021.contentdm.oclc.org/cdm/ref/collection/p16021coll11/id/950">http://cdm16021.contentdm.oclc.org/cdm/ref/collection/p16021coll11/id/950</a>.
- 88. National Academies of Science, Engineering, and Medicine Report (2023) Use of Race, Ethnicity, and Ancestry as Population Descriptors in Genomics Research. <a href="https://www.nationalacademies.org/our-work/use-of-race-ethnicity-and-ancestry-as-population-descriptors-in-genomics-research">https://www.nationalacademies.org/our-work/use-of-race-ethnicity-and-ancestry-as-population-descriptors-in-genomics-research</a>

## **Funding**

#### Ongoing Support:

NIH/NIGMS R35 GM149521(PI: Novembre)

2023-2028

Theory, Methods, and Resources for Understanding and Leveraging Spatial Variation in Population Genetic Data

Role: Principal Investigator

NIH/NIGMS R01 GM132383(PI: Novembre)  Extending tools for visualization of geographic structure in population genomic data Role: Principal Investigator	2019-2024
NIH / NHGRI R01 HG010773 (PI: He, MPI: Novembre) Refining mutation rates and measures of purifying selection with an application to under the impact of non-coding variation on neuropsychiatric diseases Role: MPI - Principal Investigator	2020-2024 rstanding
NIH / NIGMS T32 GM139782 (PI: Thornton)  Genetic Mechanisms and Evolution Graduate Training Program  Role: Co-director of T32 program	2021-2026
Completed Support (last 3 years): NIH/NCI U01 CA198933 (PI: Novembre) Tools for visualization of geographic structure in population genomic data Role: Principal Investigator	2015-2019
NIH/NIGMS R01 GM108805 (PI: Novembre)  Population genetic consequences of recent explosive population growth in humans Role: Principal Investigator	2014-2019
NIH/NHGRI R01 HG007089 (PI: Novembre) <b>Haplotype-based analysis methods for population genomics</b> Role: Principal Investigator	2013-2019
NIH/ NHLBI R01 HL119577 (PI: Di Rienzo)  Genetic adaptations to high altitude  Role: Co-Investigator	2014-2019
Service: Extramural	
Invited, Elected, Appointed	
Advisory Boards Advisory Board for Justice, Diversity, Equity, Inclusion, NIH ClinGen Project Advisory Board for Beyond the Medical NIH research project Scientific Advisory Board, Embark National Academy of Sciences Committee on Use of Race, Ethnicity, and Ancestry as Population Descriptors in Genomics Research Co-chair, Polygenic Risk Scores Guidance Writing Committee, ASHG Professional Practices and Social Implications Committee, ASHG Scientific Advisory Board, Ancestry.com Scientific Advisory Board, CartaGENE Study Member, American Society of Human Genetics Task Force on Ancestry Testing Advisor, one-day summit meeting for National Bone Marrow Donor Transplant Program	2022- 2022- 2022- 2022-2023 2021-2022 2019-2022 2012-2018 2014-2012 2011-2008 2010
Editorial work Associate Editor, Genetics	2016-

Associate Editor, Molecular Biology and Evolution  Guest editor, PLoS Genetics (4 submissions)  Manuscript Reviewer for: Nature, Science, PNAS, Nature Genetics, PLoS Genetics, Genetics, American Journal of Human Genetics, Annals of Human Genetics, Bioinformatics, BMC Bioinformatics, Conservation Genetics, Current Anthropology, European Journal of Human Genetics, Genetic Epidemiology, Genetical Research, Genes and Immunity, Genome Research, Human Biology, Human Heredity, ISMB, Journal of Molecular Evolution, Molecular Biology and Evolution, Molecular Ecology, PLoS One, Proceedings of the Royal Society B, Statistical Applications in Genetics and Molecular Biology, Trends in Genetics.		
External examiner/grant reviewer		
External Examiner, Cambridge University PhD Defense, William Barrie	2023	
NIH Review Panel F08 Fellowship panel: Genes, Genomes, and Genetics	2021	
External examiner, Trinity College Dublin PhD Defense, Ross Bryne	2020	
NIH Review Panel GVE panel, ad hoc panel member, June	2019	
NIH Review Panel NIGMS MIRA R35, November	2017	
External examiner, Copenhagen University PhD Defense, Jose Victor Moreno Mayar, May	2017	
NIH Review Panel NIGMS MIRA R35, March	2017	
NIH Review Panel ZRG1 BST-T (03) Study Section, November	2016	
Fellowship Application Reviewer, NSF Graduate Research Fellowships	2016	
Opponent, Public defense of Pontus Skoglund's doctoral thesis, Uppsalla Univeristy	2013	
External examiner, viva examination of D Phil thesis by Anjali Hinch, Oxford University	2013	
Grant Proposal Reviewer for: NIH EIA panel, UK Biotechnology and Biological Sciences Resea		
National Geographic, FWF Austria, Israeli Science Foundation, Royal Society of New Zealand		
Other		
Co-organizer, Computational Genomics Summer Institute, UCLA.	2016	
Consultant, Army Corps of Engineers on Reassessment of Ancestry of the Kennewick sample	2015-2016	
Co-chair Session on "Population Genomics" at CSHL Biology of Genomes meeting	2012	
Special Topics Editor, Molecular Ecology	2010-2009	
opecial Topics Editor, Protectial Ecology	2010 2007	
Additional:		
Organizer, Invited Session on Protections against Genetic Discrimination,	2020	
American Society of Human Genetics Meeting, Virtual.		
Co-founder and 3x lead organizer, Midwest Population Genetics Meeting, Chicago.	2019,16,14	
Co-organizer, MontyFest: A symposium in honor of Monty Slatkin	2015	
Co-organizer, Midwest Population Genetics Meeting, Ann Arbor, Michigan.	2015	
Co-organizer, Symposium on "Theory and Inference in Spatial Population Genetics"	2015, 2008	
at the Society for Molecular Biology and Evolution Meeting		
Service: Intramural		
University of Chicago		
Leadership:		
Co-chair, HG/GSSB DEI Committee	2022-	
Co-director, Genetics Mechanisms & Evolution T32 graduate training program	2022-	
Co-director, Biological Sciences Division Quantitative Biology Bootcamp	2021-	
Chair, Search Committee for population geneticist, Dept of Ecology & Evolution	2016	
Co-chair, Search Committee for computational biologist, Dept of Human Genetics	2014-2013	
of chair, scarch committee for computational biologist, Dept of Human ochetics	201 <del>7-</del> 201 <i>3</i>	

Co-organizer, Mitchell Symposium on Ancient DNA studies	2014
Committee membership: BSD Computing Activities and Services Committee Steering Committee, Genetics, Genomics and Systems Biology Committee Search Committee for BSD Dean of Graduate Affairs BSD Faculty Hiring Diversity Working Group BSD Information Systems and Informatics Committee Admissions Committee, Dept of Human Genetics University Data Science Special Report Committee Faculty Advisory Council to the Dean of Biological Sciences Division Search Committee for Strategic Hire Evolutionary Cell Biologist Committee on Appointments and Promotions (ad hoc service, 2 cases)	2021- 2016- 2021 2020-2022 2019-2021 2014-2020 2017-2018 2016-2018 2016 2014-2013
Other: Lecture, New York City UChicago Alumni Group Co-organizer, Darwin's Weekly Seminar, Dept of Ecology and Evolutionary Biology Organizer, Departmental Seminar, Dept of Human Genetics	2020 2015-2016 2013-2017
University of California–Los Angeles  Leadership: Graduate program advisor, Bioinformatics PhD IDP program Organizer, EcoEvo Theory Group Chair, EEB Department Website Redesign Committee  Committee membership: Search Committee for director of UCLA Computational Biology Initiative ad hoc Committee to redesign life sciences math requirements	2012-2009 2012-2008 2012-2010 2012 2012
Executive Committee, Bioinformatics PhD IDP program Curriculum committee, EEB Department Graduate awards committee, EEB Department EEB Seminar committee Search Committee for Director, Center for Society and Genetics Committee to design a core course for Human Biology and Society major EEB Ad hoc committee on graduate student support packages  Teaching/Training/Outreach	2012-2011 2011-2010 2011-2010 2010-2009 2009 2008 2008
Inter-departmental Program Training Appointments	
Committee on Evolutionary Biology, University of Chicago Committee on Genetics, Genomics, and Systems Biology, University of Chicago Interdepartmental Program in Bioinformatics, UCLA	2013- 2013- 2008-2013
Undergraduate courses  BIOS 20235: Biological Systems (w/I. Rebay)  EEB 135/235: Evolutionary genetics (taught jointly with EEB235)  LS1: Evolution, Ecology, and Biodiversity. (w/ M Alfaro, J Lloyd-Smith)	2024- 2012-2010 2012-2011

# Graduate courses (Ph.D.)

Graduate courses (Tri.D.)	
HG 47500: Genetic Mechanisms from Variation to Evolution. (w/F. Spitz)	2021-
BSDG 30900: Biological Sciences Division Quantitative Bootcamp	2015-
17,19-	2016
HG 48600: Fundamentals of Computational Biology: Models and Inference. (w/M Stephens) HG 46900: Human Genetic Variation and Disease. (w/A. Di Rienzo)	2016- 2015-2021
	2013-2021
HG 47100: Introduction to Statistical Genetics. (w/ Nancy Cox, Lin Chen and Brandon Pierce) MGCB 32100, "Senior Graduate Student Ethics": Lecture on Genetics, Race, and Discrimination	
2021	2017, 2017,
EEB 135/235: Evolutionary genetics	2012-2010
EEB 200A: Evolution. Co-instructors: M. Alfaro and R. Wayne	2012-2008
EEB 263: Seminar in Population genetics	2011,2009
Bootcamp on Quantitative Skills for Ecology and Evolution. (w/M Alfaro, J Lloyd-Smith)	2012-2010
Guest lectures, HG210 (3x), HC70A (3x), MCDB 172 (2x), Soc Gen 102 (2x),	2012-2008
CS/SysBio M184 (1x), CS/SysBio M185 (2x), Geography Grad Seminar (1x)	
Short courses and guest lectures	
Graduate PopGen short course, University of Copenhagen. Guest lecturer	2021
Population genomics workshop, FAS Informatics Group at Harvard University	2019
Computational Genomics Summer Institute, UCLA, Steering Committee and Lecturer	2019-2016
Instructor, Genomic Analysis of Complex Traits Sardinian Summer School (5x)	2019-2012
City University of New York BIO 31234, Guest Lecture	2018
The Jackson Laboratory. 54th Annual Short Course on Medical and Experimental Mammalian Genetics. Invited guest lecture	2014
Mount Desert Island Biological Laboratory, Environmental Genomics Short Course (3x)	2010-2014
Invited guest lecture. Organizers: J Colbourne, J Shaw, B King	2010-2014
Summer Institute in Statistical Genetics. MCMC for Genetics. Co-instructor with EA Anderson	2012
Instructor, Coalescent Theory and Methods short course. University of Berne, Switzerland	2011
Co-instructors: L Excoffier, M Foll, M Blum	2011
Watson School of Biological Science. Topics in Biology: Evolution	2005
Student Instructor for N. Patel, N. Shubin, C. Bergman	
Evolutionary Genetics. Student Instructor for M. Slatkin. University of California-Berkeley	2001-2002
Research trainees:	
Undergraduate (B.A., B.S.)	
Rose Putler, UCLA. Presently: Researcher at University of Michigan	2009-2010
Joe Marcus, University of Washington. Presently: Grail Biosciences	2013-2014
Chris Porras, University of Chicago. Presently: Mt Sinai MD/PhD program	2017-2020
Achu Menon, University of Chicago.	2020-2021
Axel Norman-Zagal, UNAM	2023
Graduate (Ph. D)	
Margaret Steiner, Human Genetics PhD student, NSF GRFP Fellow	2021-
Xinyi Li, Human Genetics PhD student	2020-
Arjun Biddanda, Human Genetics PhD student (postdoctoral fellow at Hopkins)	2015-2020
Joseph Marcus, Human Genetics, NSF GRFP Fellow PhD student (Grail)	2015-2020
Hussein Al-asadi, Committee on Evolutionary Biology, NSF GRFP Fellow PhD student	2013-2018
(joint with M Stephens; Adaptive Biotechnologies)	

Evan Koch, Ecology & Evolution, NSF GRFP Fellow PhD student	2013-2018
(postdoctoral fellow Harvard University / Broad Institute) Joel Smith, Ecology & Evolution, NSF GRFP Fellow PhD student (Zymeworks) Diego Vicente Ortega del Vecchyo, Bioinformatics IDP, UC-MEXUS fellow PhD student (group leader LIIGH)	2013-2018 2010-2016
Colin Rundel, co-advised Statistics PhD student (assistant teaching professor at Duke University)	2010-2011
Darren Kessner, Bioinformatics IDP PhD Student (faculty at the Marlborough School) Eunjung Han, T32 fellow PhD student (research scientist at Amazon Alexa Machine Learning)	2009-2014 2009-2014
Postdoctoral	
Luke Anderson-Trocmé, NSERC Fellow Hao Shen Hannah Moots, Neubauer Collegium Fellow Mashaal Sohail, Chicago Fellow (Assistant Professor, UNAM) Daniel Rice, Chicago Fellow (NCBI) Harald Ringbauer (group leader, Max Planck Institute for Evolutionary Anthropology) Mark Reppell (research scientist at Abbvie pharmaceuticals) Ben Peter, Swiss NSF Ambizione Postdoctoral fellow (group leader at Max Planck Institute for Evolutionary Anthropology) Charleston Chiang, NIH-NSRA fellow Postdoctoral fellow (Assistant professor at University of Southern California) Alex Platt (Research professor at Temple University) Daniel Wegmann, (professor at University of Fribourg) Adam Freedman, NSF Bioinformatics Postdoctoral fellow (data scientist at Harvard University) Krishna Veeramah, Mellon Foundation fellow (Assoc. Prof at Stony Brook University)	2023- 2022- 2021-2024 2019-2021 2017-2020 2018-2019 2014-2017 2014-2017 2011-2015 2011-2013 2009-2011 2009-2012 2009-2010
Sabbatical Host	
Enrique Lessa, Professor, Universidad de la Republica, Uruguay.	2014
Genetics, Race, and Discrimination Curriculum Outreach/Development	
MGCB 32100, "Senior Graduate Student Ethics": Guest Lecture (3x)	2017-2021
Initiated a guest lecture within the student ethics course to help train students in understanding and addressing i Genetics, Race, and Discrimination in the classroom and research fields.	ssues of
Interviewed by Amy Harmon for piece on genetics and race in the New York Times, Discussed how genetics is abused by racist individuals and how geneticists need to confront this more directly.	2018
Faculty advisor, Reading group on Race and Genetics, Department of Human Genetics  A reading group that covered the history of race concepts in human genetics. Material shared via a website:  https://voices.uchicago.edu/geneticists-against-hate/	2020
Invited speaker for online workshop, "How and Why to Include Eugenics History in	2020
in Genetics Classes." Genetics Society of America TAGC meeting, May.  Spoke on the practices we have developed at University of Chicago and lessons learned for running effective session eugenics, race, and discrimination.	ons discussing
Inclusive mentoring activities:	
Co-Chair, DEI committee for Human Genetics Department / GGSB program Member, BSD Faculty Hiring Diversity Working Group Co-founder and 3x lead organizer, Midwest Population Genetics Meeting, Chicago.	2022- 2020-2022 2014-2019

Initiated a regional meeting that is heavily student focused — all talks are by students or faculty new to the region keynote talk by a senior professor.	apart from a
Mentor, ASHG Trainee-Mentor Luncheon	2017, 2019
Undergrad diversity mentor, Society for Molecular Biology meeting	2011, 2008
Role modeling how scientific interactions can foster community and time with family abroad:	,
Lecturer in 1st, 3rd, and 6th Latin American School of Evolution for graduate students.  Montevideo, Uruguay and Buenos Aires, Argentina.	2019,13,09
Instructor for 4 days of a Human Genomics course, Institut Pasteur, Montevideo, Uruguay.	2016
Advisor, UruGenoma project, director: Hugo Naya	2015-
Two-week research visit to Enrique Lessa, the Universidad de la Republica, Uruguay.	2003
Outreach	
Public/non-academic venue lectures	
Public Lecture for Iowa City Darwin Day, Iowa City, IA.	2020
Public Lecture for Pint of Science Series, Baderbauer Brewery, Chicago, IL.	2018
Public Lecture for Chicago Science & Technology Society, The Pint, Chicago, IL.	2018 2017
Lecture, Elective Studies Supper Club, Illinois Humanities, Chicago, IL.	
Keynote speaker, Opening Convocation, Colorado College.	2016
Panel conversation with Tara Zahra at the Economic Club of Chicago.	2016
Lecture at MacArthur Fellows Retreat at the Johnson Foundation.	2016
Public Lecture for Pint of Science Series, Blue Moon Pub, Chicago, IL.	2015
Selected Outreach / Online products	
Online interview: Reddit Science Ask Me Anything Series	2015
Radio interview: WBEZ Chicago Morning Shift	2015
"University of Chicago computational biologist receives MacArthur Genius Grant	
Video interview "Computational Biologist John Novembre, 2015 MacArthur Fellow"	2015
Radio interview: NPR Morning Edition "Genome Maps May Spot Disease In African-Americans	
Video interview: Science Central News "Gene-ograpy" video for distribution on ABC networks	2008
Video by American Musum of Natural History	2008
Shown in the Hall of Human Origins at the American Museum of Natural History (NYC, NY)	
the Frank H. McClung Museum (Knoxville, TN), the Great Lakes Science Center (Cleveland, C	
and Science World (Vancouver, BC).	,,
Additional Outreach:	
PBSNews, What scientists are thankful for this Thanksgiving	2016
Media surrounding announcement of MacArthur Fellowship	2015
- Interviews with: Chicago Tribune, Chicago Sun Times, WBEZ Morning Shift, PBS NewsH	our,
Fast Company, Colorado Springs Gazette	
- Announcement and summary of research featured in multiple additional venues.	
Media surrounding dog domestication research:	2013
- Freedman et al research 18th out of top 25 science stories of 2013 in Science News Magazin	ne
Outreach from ancestry-based recombination map estimation research:	2011
- Covered by media outlets: National Public Radio "Morning Edition", Boston Globe,	
LA Times, Science News, Genome Web News, ScienceDaily, BET, EurekAlert, Bio-Medicine,	
Jerusalem Post, GPB News, Atlanta Pos, Medical Xpress, News-Medical.net, RedOrbit	
-Covered by science journals: Nature Genetics News and Views	
Outreach from dog domestication research:	2010

Covered by world media outlets: New York Times, Washington Post,
San Francisco Chronicle, Toronto Star, Jerusalem Post, Reuters UK, India, and Africa,
Malaysia Sun, Argentina Star, The Hindu Business Line, People's Daily (China), Voice of America
- Focus of a comedic news item on Colbert Report
Outreach from "Genes mirror geography in Europe" research:
- Covered by world media outlets: New York Times, International Herald Tribune,
Spiegel (Germany), La Stampa (Italy), Folha (Brazil), World Journal (China), Malaysia Sun,
New Kerala (India).
- Covered by various science media outlets: New Scientist, Technology Review,
Discover Magazine, Popular Science, Tech Herald, Science Daily
- Covered by science journals: Nature Reviews Genetics, Nature Podcast, ScienceNOW
Source for background on population genetics by science journalists at: Discover Magazine,
Nature, New Scientist, New York Times, Los Angeles Times, Huffington Post

## **Invited Speaking**

#### **Departmental Seminars** Department of Computational Biology, University of Southern California 2023 Department of Computational Biology, Cornell University 2023 Department of Genetics, Cambridge University 2023 Genome Sciences Training Program, University of Michigan 2022 Institute for Ecology and Evolution, University of Oregon 2022 Department of Science, Technology, & Mathematics, Galludet University, April. 2021 Lewontin 1972 Seminar Series, Stanford University, September. 2021 Department of Biology, University of Iowa, February. 2020 Department of Biology, University of Illinois-Chicago, February. 2020 Population Genetics Groups Seminar, Arizona State University, January. 2020 Human Genetics Seminar Series, University of Utah, May. 2019 Department of Systems Biology, Columbia University, April. 2019 A. Watson Armour Seminar Series, The Field Museum, February. 2018 University of Maryland School of Medicine, Institute for Genome Sciences, May. 2018 Genome Science Seminar Series (GS3) at University of Virginia sponsored by the Center 2018 for Public Health Genomics (CPHG), April. Broad Institute, Medical and Population Genetics Program, March. 2018 University of California - San Diego, Genetics, Bioinformatics and Systems Biology 2018 Colloquium, February. Duke University Program in Genetics and Genomics Distinguished Lecturer Series, Nov. 2017 bioCaddie Seminar Series, March. 2017 McKusick-Nathans Institute of Genetic Medicine, Johns Hopkins University 2017 School of Medicine, February. Distinguished Speaker Series, Max Planck Institute for Developmental Biology and 2016 the Friedrich Miescher Laboratory, June. Program in Genetics, North Carolina State University, April. 2016 Biology Week, Chicago State University, April. 2016 Biodiversity Research Seminar Series, University of British Columbia, March. 2016

•	Department Seminar, International Laboratory for Human Genome Research of the Universidad Nacional Autonoma de Mexico (UNAM), November.	2015
•	Biology Colloquium, University of Wisconsin-Milwaukee, November.	2015
•	Department of Ecology and Evolution, Stony Brook University, October.	2015
•	Department of Evolution, Ecology and Organismal Biology, Ohio State University, April	2015
•	Department of Biological Sciences, Florida State University, April.	2015
•	Computational Biology Seminar Series (student-run), UC-Berkeley, February.	2015
•	Molecular Biology Seminar Series, Genentech, June.	2014
•	National Center for Biological Sciences, Bangalore, India, February.	2014
•	Postdoc-invited speaker, Department of Genome Sciences, University of Washington, Jan.	2014
•	Seminars of the Barcelona Biomedical Research Park, Barcelona, September.	2013
•	The Jackson Laboratory, September.	2013
•	Wellcome Trust Center for Human Genetics, April.	2013
•	Genetics Interdisciplinary Program, University of Arizona, April.	2013
•	Genomics Seminar Series, University of Wisconsin – Madison, January.	2013
•	Pharmaceutical/Pharmacogenomics Seminar Series, UCSF, June.	2013
•	Department of Genome Sciences, University of North Carolina, December.	2012
•	Evolutionary Genomics Group, University of California – Berkeley, August.	2012
•	Department of Ecology and Evolution, University of California-Davis, June.	2012
•	School of Public Health, Harvard University, March	2012
•	Dept of Ecology, Evolution, and Marine Biology, UCSB, February.	2012
•	Center for Investigation in Biodiversity and Genetic Resources, Portugal, March.	2011
•	Licenciatura en Ciencas Genomicas, Universidad Nacional Autonoma de Mexico, February.	2011
•	Center for Computational Science, Tulane University, February.	2011
•	Department of Basic Sciences, The Commonwealth Medical College, November.	2010
•	Department of Biological Sciences, University of Idaho, November.	2010
•	Dept. of Evolutionary Genetics, Max Planck Institute for Evolutionary Anthropology, June.	2010
•	Department of Human Genetics, University of Michigan, May.	2010
•	Institute of Ecology and Evolution, University of Berne, January.	2009
•	Department of Biostatistics, University of Southern California, December.	2008
•	Department of Ecology and Evolutionary Biology, University of California-Irvine, Nov.	2008
•	Department of Biological Sciences, Humboldt State University, October.	2008
•	Dept. of Molecular and Computational Biology, University of Southern California, Sept.	2008
•	Department of Biology, The Colorado College, April.	2007
•	Department of Human Genetics, University of Michigan, March.	2007
•	Department of Ecology and Evolution, University of California-Los Angeles, November.	2005
•	Hayama Seminar, Graduate University for Advanced Studies (Sokendai), Japan, August.	2005
•	Department of Biology, The Colorado College, March.	2004
•	Facultad de Ciencias, Universidad de la Republica, Uruguay, March.	2003
<u>C</u> c	onference Presentations	
•	Gordon Conference for Human Genetics and Genomics	2023
•	Global Genomics & Health Equity and Institute for Biomedical Informatics Symposium	2023

on "Human Genomic Diversity and Medicine: Challenges and Solutions to Reduce Health Disparities" University of Pennsylvania	
Keynote, MexPopGen meeting, December.	2020
Online workshop, "Raising a Woke Generation of Geneticists: How and Why to	2020
Include Eugenics History in Genetics Classes." Genetics Society of America TAGC meeting, May.	
Plenary speaker. Advances in Genome Biology and Technology. San Marcos, Florida, Feb.	2020
Reconstructing the Human Past – Using Ancient and Modern Genomics. EMBO Heidelberg, March.	2019
Workshop on the Polygenic Turn, Edmond J Safra Center for Ethics, Oct.	2018
Gene Flow detection session. SMBE Annual Meeting, Japan, July.	2018
Keynote, Mathematical Computational Evolutionary Biology Meeting, Montepellier, France, June.	2018
Keynote for Great Lakes Bioinformatics Consortium Conference, May.	2017
Plenary for Gordon Research Conference on Quantitative Genetics and Genomics, Feb.	2017
National Academy of Sciences/ Kavli Frontiers of Science meeting, November.	2016
CSHL Banbury Meeting "Ancient DNA and Archaeology", May (discussant)	2016
Center for Computational, Evolutionary and Human Genomics Annual Symposium, Stanford University, February.	2016
"Sequencing the Human Past" Symposium, University of California-Los Angeles, October.	2015
SardiNIA Symposium at the National Institute of Aging, October.	2015
9th ISABS Conference in Forensic, Anthropological and Medical Genetics and Mayo Clinic	
Lectures on Translational Medicine, Bol, Island of Brac, Croatia June.	2015
SMBE Symposium on Adaptive Evolution, Montpellier, France, May.	2015
American Society of Human Genetics (ASHG) Genetic Ancestry Inference Roundtable II (invited participant)	2015
NESCent Simbank Workgroup meeting, November.	2014
Keynote Speaker, Pharmacogenomics Research Network Meeting, Sept.	2014
Cell Symposium: Evolution of Modern Humans – From Bones to Genomes, Sitges, Spain, March.	2014
Grad-student invited keynote Biomedical Computation at Stanford Conference, Stanford University, January.	2014
4th Biological Evolution Workshop, Porto Alegre, Brazil. November.	2013
Plenary Session, Genomics: From Population to Personal, ASHI, November.	2013
Coalescent Theory: New Developments and Applications Meeting, Montreal, October.	2013
Invited Session, Insights from Large Scale Sequencing, ASHG, October.	2013
NGx Dynamics of Microbiome in Health and Disease Conference, August.	2013
Biodiversity Genomics Conference and Workshop, Australia National University, April.	2013
1000 Genomes Community Meeting, University of Michigan, July.	2012
Mathematical Biosciences Institute workshop "Spatial Models of Micro and Macro Systems," April.	2012
Royal Society Discussion meeting on Human evolution, migration and history revealed by genetics, immunity and infection, June.	2011
NSF MIGRATE workshop, Max Planck Institute for Ornithology, Germany, June.	2010
American Association for Anthropological Genetics symposium at the AAPA meeting. April.	2010

•	Keynote, "Peopling of Europe" session, 4th Congress on DNA polymorphisms in human	2009
	populations, Rome, Italy, December.	
•	American Society for Human Genetics Genetic Anthropology at Fine Scales Workshop, Oct.	2009
•	Darwin 200 South American Celebration Conference, Uruguay, September.	2009
•	Gordon Conference on Ecological and Evolutionary Functional Genomics, July.	2009
•	Kavli Institute for Theoretical Physics, Population Genetics Program, December.	2008
•	Third International Symposium on Conservation Genetics,	2007
	American Museum of Natural History, September.	