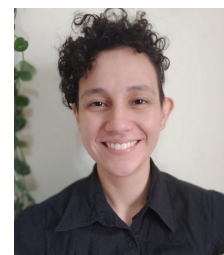


# Cristiane Hayumi Taniguti | CV

- » Computer skills : Docker, git, Makefile, Inkscape
- » Programming languages: R, Bash, WDL
- » Languages: Portuguese (native), English
- » email: [chtaniguti@tamu.edu](mailto:chtaniguti@tamu.edu)



Currently, I am Postdoctoral Research Associate in the Texas A&M University Rose Breeding and Genetics Program. During my undergraduate I did scientific initiation in different areas including organic chemistry of fungus micotoxins, cellular regulation of CNC transcription factors, QTLs studies for fat deposition in mice, differential expression studies in *Anastrepha obliqua* and SNP calling in sugarcane GBS dataset. With these experiences I developed skills in laboratory techniques as chromatography, cell cultures, western blot, RNAi and RT-PCR. In my master, I continued studying SNP and genotype calling methods and built a integrated genetic map for a outcrossing population from the cross of *Eucalyptus grandis* x *Eucalyptus urophylla*.

In my PhD, I have concentrated my studies in develop new methods and algorithms to build genetic maps in diploid species with markers coming from modern sequencing technologies. In my postdoctoral research, I am developing bioinformatic workflows to perform and compare SNP calling, dosage calling and linkage map building using different methods in diploid and polyploid species. I also develop and maintain the VIEWpoly package for visualization and integration of genetic analysis results of polyploid species. I am part of the computational support team in the Tools for Polyploids Workshop. My other interests includes QTL Mapping, Molecular Biology, and Genome-Wide Association. I have collaborated in linkage and QTL mapping studies in rubber tree, roses, miscanthus, beans and eucalyptus. As maintainer of OneMap and VIEWpoly software, I frequently help users with linkage mapping in several species and I aprimorate the software according with the demand.

## »»» Education

2017-2021 (4 years)	Ph.D. in Genetics and Plant Breeding	University of São Paulo – ESALQ/USP
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- » Title: Building highly saturated genetic maps with OneMap 3.0: new approaches using workflows
- » Advisor: Prof. Antonio Augusto Franco Garcia
- » Statistical Genetics Laboratory

2015-2017 (2 years)	Master Degree in Genetics and Plant Breeding	University of São Paulo – ESALQ/USP
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- » Title: Development of an integrated genetic map for a full-sib progeny from crossing between *Eucalyptus grandis* and *Eucalyptus urophylla*
- » Advisor: Prof. Antonio Augusto Franco Garcia
- » Statistical Genetics Laboratory

2009 – 2014 (5 years)	Bachelor's Degree in Biotechnology	Federal University of São Carlos – UFSCar
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- » Title: Gene expression of *Anastrepha obliqua* male tissue libraries
- » Advisor: Prof. Reinaldo Alvarenga Alves de Brito
- » Population Genetics and Evolution Laboratory

## »»» Experience

2021 - present	Postdoctoral Research Associate	Texas A&M University, Department of Horticultural Sciences
	<ul style="list-style-type: none"> <li>» Funded by USDA SCRI grant: "Tools for Genomic-Assisted Breeding in Polyploids" Grant No. 2020-51181-32156</li> <li>» Supervisor: Oscar Riera-Lizarazu and David Byrne</li> </ul>	
2014	Intern	Sugarcane Technology Center – CTC
	<ul style="list-style-type: none"> <li>» Topic: SNP calling in sugarcane GBS dataset</li> <li>» Supervisor: Sabrina Chabregas</li> </ul>	
2012 (3 months)	Summer student	McGill University MCGILL
	<ul style="list-style-type: none"> <li>» Title: Cellular regulation of CNC transcription factors</li> <li>» Advisor: Prof. Volker Blank</li> <li>» Division of Experimental Medicine</li> </ul>	
2009-2010	Technical training	Accert! Chemistry and Biotechnology
	<ul style="list-style-type: none"> <li>» Topic: Studies in commercial important micotoxin production by fungus of <i>Fusarium</i> gender</li> <li>» Supervisor: Rodrigo Facchini Magnani</li> </ul>	

## »»» Publications

Refereed articles for which reprints are available:

Article	<b>TANIGUTI, C. H.</b> ; GESTEIRA, G. S.; LAU, J.; PEREIRA, G. S.; ZENG, Z. B.; BYRNE, D. H.; RIERA-LIZARAZU, O.; MOLLINARI, M. . VIEWpoly: a visualization tool to integrate and explore results of polyploid genetic analysis. <b>Journal of Open Source Software</b> . doi: 10.21105/joss.04242, 2022.
Article	RAVERDY, R.; LOURGANT, K.; MIGNOT, E.; ARNOULT, S.; BODINEAU, G.; GRIVEAU, Y., <b>TANIGUTI, C. H.</b> & BRANCOURT-HULMEL, M. . Linkage Mapping of Biomass Production and Composition Traits in a <i>Miscanthus sinensis</i> Population. <b>BioEnergy Research</b> , doi: 10.1007/s12155-022-10402-8, 2022.
Article	ALMEIDA, C. P.; PAULINO, J. F. de C. ; BONFANTE, G. F. J. ; PERSEGUINI, J. M. K. C. ; SANTOS, I. L. ; GONÇALVES, J. G. R. ; PATRÍCIO, F. R. A. ; <b>TANIGUTI, C. H.</b> ; GESTEIRA, G. de S. G.; GARCIA, A. A. F. ; SONG, Q. ; CARBONELL, S. A. M. ; CHIORATO, A. F. & BENCHIMOL-REIS, L. L. . Angular Leaf Spot Resistance <i>Loci</i> Associated With Different Plant Growth Stages in Common Bean. <b>Frontiers in Plant Science</b> , doi: 10.3389/fpls.2021.647043, 2021.
Article	CONSON, A. R. O.; <b>TANIGUTI, C. H.</b> ; AMADEU, R. R.; ANDREOTTI, I. A. A.; DE SOUZA, L. M.; DO SANTOS, L. H. B.; DE SOUZA, A. P. . High-resolution genetic map and QTL analysis of growth-related traits of <i>Hevea brasiliensis</i> cultivated under suboptimal temperature and humidity conditions. <b>Frontiers in Plant Science</b> , doi: 10.3389/fpls.2018.01255, 2018.
Article	NAKAMURA, A. M.; CHAHAD-EHLERS, S.; LIMA, A. L. A.; <b>TANIGUTI, C. H.</b> ; SOBRINHO Jr, I.; TORRES, F. R.; DE BRITO, R. A. Reference genes for accessing differential expression among developmental stages and analysis of differential expression of OBP genes in <i>Anastrepha obliqua</i> . <b>Scientific Reports</b> , doi: 10.1038/srep17480, 2016.

Available as pre-print:

Article GAZAFFI, R.; AMADEU, R. R.; MOLLINARI, M.; ROSA, J. R. B. F.; **TANIGUTI, C. H.**; MARGARIDO, G. R. A.; GARCIA, A. A. F. . *fullsibQTL: an R package for QTL mapping in biparental populations of outcrossing species*. **bioRxiv**, doi: 10.1101/2020.12.04.412262, 2020.

### »»» Awards

2021	Market Ready Prize - Cornell Institute Digital Agriculture Hackathon 2021
2018	WikiProject Computational Biology/ISCB award 2018 - International Society for Computational Biology (ISCB) and WikiProject Computational Biology
2017	Best Poster Award - Brazilian Association for Bioinformatics and Computational Biology

### »»» Relevant courses

Graduate	Experimental Statistics - Linear Models - Mix Models and Variance Components - Molecular Genetics - Genomics and Bioinformatics - Applied Bioinformatics - Molecular Markers Biometry - Quantitative Genetics - Population Genetics - Evolution
Ungraduate	Biochemistry 1 & 2 - Calculus 1 & 2 - Bioprocess 1 & 2 - Molecular Biology - Introduction to planning and statistical analysis of experiments - Bioinformatics - Plant Biotechnology - Bioethics

### »»» Extracurricular courses

2022	Data processing and visualization in the cloud with Terra, Dockstore, and Galaxy – Broad Institute (MIT and Harvard) tutorial in ISMB 2022 Conference
2020	Training in Scientific Dissemination – from extension groups GENT and DivulgaMicro ESALQ/USP
2020	Introduction to Machine Learning I – Mathematics and Statistics Institute/USP - São Paulo, Brazil
2020	Criativity and Problems Solution – Mathematics and Statistics Institute/USP - São Paulo, Brazil
2019	Trainning in Scientific Dissemination – IGNITE ESALQ/USP
2018	Statistical Mechanisms and Practical Applications of Genome-wide Association Studies, Genomic Selection, and Related Analysis - Piracicaba-SP, Brazil
2017	Analysis of Experiments using ASReml-R – ESALQ/USP - Piracicaba-SP, Brazil
2017	Winter Bioinformatic Course – UNIFESP - São José dos Campos-SP, Brazil
2015	University Extension in Introduction to Programming – Mathematics and Statistics Institute/USP - São Paulo, Brazil
2015	University Extension in Combinatorial, Probabilities and Applications – Mathematics and Statistics Institute/USP - São Paulo, Brazil
2014	University Extension in Matrices – ESALQ/USP
2012	IV Summer course in Bioinformatics: Algoritms and computational methods for genome analysis and assembly. – UNICAMP, Campinas - SP, Brazil

## »»» Event participation

2022	30th Conference on Intelligent Systems for Molecular Biology – Madison-WI, United States
2022	Tools for Polyploids Workshop – Online event
2022	International Plant and Animal Genome XXV (PAGXXIX) – Online event
2021	Cornell Institute for Digital Agriculture Hackathon – Online event
2021	Tools for Polyploids Workshop – Online event
2020	X Four Biotech - Four days for Biotechnology – Online event
2020	I Graduate Meeting of University of São Paulo "She makes science" – Online event
2019	III International Meeting on Plant Breeding (DUPONT/PIONEER Plant Science Symposia) – Piracicaba-SP, Brazil
2018	II International Meeting on Plant Breeding - Advances in Experimental Design and Statistical Analysis in Genetics and Plant Breeding – Piracicaba-SP, Brazil
2018	17th meeting of the EUCARPIA Section Biometrics in Plant Breeding – Ghent, Belgium
2018	XII Workshop in Genetics and Plant Breeding – Piracicaba-SP, Brazil
2017	X-meeting 2017 13 <sup>th</sup> International Conference of the AB3C – São Pedro-SP, Brazil
2017	XI Workshop in Genetics and Plant Breeding – Piracicaba-SP, Brazil
2016	X Workshop in Genetics and Plant Breeding – Piracicaba-SP, Brazil
2015	Brazilian edition of the "Tucson Plant Breeding Institute" – Piracicaba-SP, Brazil
2013	Brazilian Genetics Congress – Águas de Lindóia-SP, Brazil
2012	Workshop - Center of Functional Genomics Applied to Agriculture and Agroenergy – Piracicaba, Brazil
2011	III Four Biotech - Four days for Biotechnology – São Carlos, Brazil
2010	I Workshop in Genetics and Plant Breeding - The Omics Era – Piracicaba-SP, Brazil
2010	II Four Biotech - Four days for Biotechnology – São Carlos-SP, Brazil
2009	I Four Biotech - Four days for Biotechnology – São Carlos-SP, Brazil

## »»» Oral presentation in events

2022	Genetic data analysis in polyploids: from allelic dosage to QTL mapping at GVENCK workshop
2022	Reads2map: Practical and Reproducible Workflows to Build Linkage Maps from Sequencing Data at Tools for Polyploids Workshop
2022	VIEWpoly: An Interactive Tool to Visualize, Explore and Integrate Genetic Maps and QTL Analysis with Genomic Information at XXIX Plant & Animal Genome Conference

2020	Short course “R introduction and applications in genetics” at X Four Biotech event (UFSCar)
2020	Plant Biotechnology: from domestication to modern plant breeding at BiotechLives (NBB Santa Cruz do Sul)
2019	Talk “Statistical Genetics in Breeding 4.0” at Workshop in Genetics and Plant Breeding (ESALQ/USP)

### »»» Courses taught and other services provided to students and professionals

2021	Update on Statistical Tools Applied to Plant Breeding (Epagri - Research Center for Family Agriculture)
2020	SNP and genotype calling in GBS data - A practical guide (ESALQ/USP - GGGC lab)
2019	Monitor of Genetic Marker Biometry discipline for graduate students (ESALQ/USP)
2018	Participation in the discipline Molecular Biology Applied to Plant Breeding with the talk “Building genetic maps, QTL mapping and applications in Plant Breeding” for graduate students – Agronomic Institute of Campinas (IAC)
2017	Monitor of Genetic discipline for undergrad students (ESALQ/USP)
2016 - 2020	Short courses of programming in R environment (ESALQ/USP)

### »»» Poster presentations

Abstract	<b>TANIGUTI, C. H.;</b> TANIGUTI, L. M. ; GESTEIRA, G. S. ; OLIVEIRA, T. P. ; LAU, J. ; FERREIRA, G. C. ; AMADEU, R. R. ; BYRNE, D. ; RIERA-LIZARAZU O. ; PEREIRA, G. S. ; MOLLINARI, M. & GARCIA, A. A. F.. Comparing genotype calling software performance in Genotyping-by-Sequencing data of outcrossing population based on genetic maps quality. <b>30th Conference on Intelligent Systems for Molecular Biology</b> , 2022.
Abstract	<b>TANIGUTI, C. H.;</b> TANIGUTI, L. M. ; GESTEIRA, G. S. ; OLIVEIRA, T. P. ; LAU, J. ; FERREIRA, G. C. ; AMADEU, R. R. ; BYRNE, D. ; RIERA-LIZARAZU O. ; PEREIRA, G. S. ; MOLLINARI, M. & GARCIA, A. A. F. . Reads2Map: Practical and reproducible workflows to build linkage maps from sequencing data. <b>XXIX Plant &amp; Animal Genome Conference</b> , 2022.
Abstract	<b>TANIGUTI, C. H.;</b> GESTEIRA, G. S. ; LAU, J. ; PEREIRA, G. S. ; BYRNE, D. ; ZENG, Z. B. ; RIERA-LIZARAZU O. & MOLLINARI, M. . VIEWpoly: An interactive tool to visualize, explore and integrate genetic maps and QTL analysis with genomic information. <b>XXIX Plant &amp; Animal Genome Conference</b> , 2022.
Abstract	<b>TANIGUTI, C. H.;</b> SOUZA, I. C. G. ; ODA, S. ; SIQUEIRA, L. ; GRACA, R. N. ; BENATTI, T. R. ; STAPE, J. L. ; GARCIA, A. A. F. . Development of an integrated genetic map for an Eucalyptus full-sib population considering high error probabilities for low-depth GBS markers. <b>EUCARPIA Section Biometrics in Plant Breeding</b> , Belgium, 2018.
Abstract	<b>TANIGUTI, C. H.;</b> SOUZA, I. C. G. ; ODA, S. ; SIQUEIRA, L. ; GRACA, R. N. ; BENATTI, T. R. ; STAPE, J. L. ; GARCIA, A. A. F. . Development of an integrated genetic map for a full-sib progeny from crossing between <i>Eucalyptus grandis</i> and <i>Eucalyptus urophylla</i> . <b>X-meeting - 13th International Conference of the Brazilian Association for Bioinformatics and Computational Biology</b> , Brazil, 2017.

**»»» Participation in committees**

2021 ZUCCHI, M. I. ; TANIGUTI, C. H. ; MARGARIDO, G. R. A. Participation in qualification exam committee of Aline da Costa Lima Moraes. Molecular-genetics studies in *Urochloa humidicola*: building a high-dense linkage map. State University of Campinas.

**»»» Event co-organization**

2019 Training - Genotype to Phenotype models for Traditional and New Phenotyping data in Plant Breeding - Piracicaba-SP, Brazil

2018 II International Meeting on Plant Breeding - Advances in Experimental Design and Statistical Analysis in Genetics and Plant Breeding – Piracicaba-SP, Brazil

2017 XI Workshop of Genetic and Plant Breeding – ESALQ/USP Brazil

2015 Brazilian edition of the "Tucson Plant Breeding Institute" – Piracicaba-SP, Brazil

2010 II Four Biotec – USFSCar/São Carlos-SP, Brazil

2009 I Four Biotec – USFSCar/São Carlos-SP, Brazil

**»»» Community service**

2019 Participation in “Domingão do Faustão” live program in open television

2018-2019 Co-founder of the GENT University extension group and participation in its activities

2018 Scientific communication with society through “Algoritmos nosso de cada dia” text in “Ciência Informativa” blog

2017 Popular Legal Promoters Course – PLPs

2016 Aerial Silk performance at “De última hora” show for get fundings to “Lar Betel-Piracicaba”