# SABRINA T. AMORIM

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#### **EDUCATION**

Virginia Polytechnic Institute and State University, Virginia Tech PhD. in Animal Sciences	2021 - Present
Universidade Estadual Paulista, UNESP  MSc. in Genetics and Animal Breeding	2018 - 2020 GPA: 4.0
Universidade Federal de Santa Catarina, UFSC B.S. in Animal Sciences	2013 - 2017 GPA: 3.3

## PROFESSIONAL POSITIONS

CALS Graduate Teaching Scholar, Virginia Tech, USA.	2022- Present
Graduate Research Assistant, Virginia Tech, USA.	2021- Present
MSc Research Visitor, Virginia Tech, USA.	2019- 2019
Graduate Research Assistant, Universidade Estadual Paulista.	2018- 2020
Undergraduate Intern, Universidade Estadual Paulista, UNESP, Brazil.	2017-2017
Administrative Assistant, Universidade Federal de Santa Catarina, UFSC, Brazil.	2017-2017
Scientific Research Iniciation, Universidade Federal de Santa Catarina, UFSC, Braz	il. 2017-2017
Translator, and Producer, Khan Academy Brasil Project, Brazil.	2015-2018

## RESEARCH PROJECTS

Computer vision systems for data-driven monitoring in Animal Sciences, Virginia Tech. 2021- Present.

An assessment of the relationship between Genomic Connectedness and Prediction Accuracy for fat composition traits in Nellore beef cattle, Virginia Tech.

2019- 2019. FAPESP Process: 2019/04929-0.

Epistatic Interactions associated with Fatty Acid Profile of beef from Nellore cattle, UN-ESP.

2018- 2020. FAPESP Process: 2018/19463-4.

Genomic Evaluation in a commercial beef cattle population using real and simulated data, UNESP.

2016- Present. FAPESP Process:16/22751-6.

Analysis copy number variation in the genome and its associations with quantitative, qualitative traits and meat fatty acid profile in Nellore cattle, UNESP.

2017-Present. CNPq Process: 405025/2016-5.

Efficiency in feed conversion in Pigs: Association of favorable alleles with nutritional modeling, UFSC.

2016-2017. CNPq Process: 102189/2017-0.

Study of the Genetic Variability of Meat Fatty Acids Profile in Nellore cattle finished in Feedlot, UNESP.

2015-Present. FAPESP Process: 11/21241-0.

## PEER REVIEWED JOURNAL PAPERS

- 12. Kadlec, R.; Indest, S.; Castro, K.; Waqar, S.; Campos, L.M.; Amorim, S.T; Bi, Y.; Haningan, M.D.; Morota, G. Automated acquisition of top-view dairy cow depth image data using an RGB-D sensor camera. Translational Animal Science, 2022. DOI: 10.1093/tas/txac1639.
- 11. Amorim, S. T; Tsuyuzaki, K.; Nikaido, I.; Morota, G. Improved MeSH analysis software tools for farm animals. Animal Genetics, 2022. DOI: 10.1111/age.13159.
- 10. Tonussi, R.L.; Londoño-Gil, M.; De Oliveira Silva, R. M.; Magalhães, A. F. B.; Amorim, S. T; Kluska, S.; Espigolan, R.; Peripolli, E.; Pereira, A. S. C.; Lôbo, R. B.; Aguilar, I.; Lourenço, D. A. L.; Baldi, F. Accuracy of genomic breeding values and predictive ability for postweaning liveweight and age at first calving in a Nellore cattle population with missing sire information. Tropical Animal Health and Production, 2021. DOI: 10.1007/s11250-021-02879-w.
- 9. Amorim, S. T; Stafuzza, N. B.; Kluska, S.; Peripolli, E.; Pereira, A. S. C.; Muller, L. F.; De Albuquerque, L. G.; Baldi, F. Genome-Wide Interaction Study Reveals Epistatic Interactions for Beef Lipid-Related Traits in Nellore Cattle.. Animal Genetics, 2021. DOI: 10.1111/age.13124.
- 8. Berton, M. P.; Lemos, M.; Chud, T.; Stafuzza, N. B.; Kluska, S.; Amorim, S. T.; Lopes, L. S. F.; Pereira, A. S. C.; Bickhart, D.; Liu, G.; Albuquerque, L. G.; Baldi, Fernando. Genome-wide association study between copy number variation regions and carcass and meat quality traits in Nellore cattle. Animal Production Science, 2021. DOI: https://doi.org/10.1071/AN20275
- 7. Feitosa, F. L. B.; Pereira, A. S. C.; Mueller, L.; Fonseca, P.; Braz, C.; Amorim, S. T.; Espigolan, R.; Lemos, M. V. A.; Albuquerque, L. G.; Schenkel, F.; Brito, L.; Stafuzza, N. B.; Baldi, F. Genome-wide association study for beef fatty acid profile using haplotypes in Nellore cattle. Livestock Science, 2021. DOI:https://doi.org/10.1016/j.livsci.2021.104396.
- 6. Amorim, S. T.; Yu, H.; Momen, M.; Albuquerque, L. G.; Pereira, A. S. C.; Baldi, F.; Morota, G. An assessment of Genomic Connectedness measures in Nellore cattle. Journal of Animal Science, 2020. DOI:https://doi.org/10.1093/jas/skaa289.
- 5. Feitosa, F.L.B.; Pereira, A.S.C.; Amorim, S. T.; Peripolli, E.; Silva, R.M.O.; Braz, C.U.; Ferrinho, A.M.; Schenkel, F.S.; Brito, L.F.; Espigolan, R.; de Albuquerque, L.G.; Baldi, F. Comparison between haplotype-based and individual SNP-based Genomic Predictions for beef fatty acid profile in Nelore cattle. Journal Of Animal Breeding And Genetics, 2019. DOI: 10.1111/jbg.12463.
- 4. Peripolli, E.; Stafuzza, N. B.; Amorim, S. T.; Lemos, M. V. A.; Grigoletto, L.; Kluska, S.; Ferraz, J. B. S.; Eler, J. P.; Mattos, E. C.; Baldi, F. Genome-wide scan for runs of homozygosity in composite Montana Tropical® beef cattle. Journal Of Animal Breeding And Genetics, 2019. DOI: 10.1111/jbg.12428.
- 3. Stivanin, T.; Maia, F. M. C.; Migliorini, E.; Kluska, S.; Amorim, S. T.; Lovatto, F. S.; Martins, E. N. Evaluation of selection criteria in laying quails (Coturnix coturnix japonica). Livestock Research for Rural Development, 2019. DOI: 10.13140/RG.2.2.21536.94727.
- 2. Bonamy, M.; Kluska, S.; Peripolli, E.; Lemos, M. V. A.; Amorim, S. T.; Vaca, R. J.; Lobo, R. B.; Castro, L. M.; Faria, C. U.; Ferrari, F. B.; Baldi, F. Genetic association between different criteria to define sexual precocious heifers with growth, carcass, reproductive, and feed

- efficiency indicator traits in Nellore cattle using genomic information. Journal of Animal Breeding and Genetics, v. 136, p. 15-22, 2018. http://dx.doi.org/10.1111/jbg.12366.
- 1. Amorim, S. T., Kluska, S.; Berton, M. P.; Lemos, M. V. A.; Peripolli, E.; Stafuzza, N. B.; Martin, J. F.; Alvarez, M. S.; Gavina, B. V.; Toro, M. A.; Banchero, G.; Oliveira, P. S.; Grigoletto, L.; Eler, J. P.; Baldi, F.; Ferraz, J. B. S. Genomic study for maternal related traits in Santa Inês sheep breed. Livestock Science, v. 217, p. 76-84, 2018. http://dx.doi.org/10.1016/j.livsci.2018.09.011.

## PEER-REVIEWED PROCEEDING PAPERS

- 2. Amorim, S. T.; Eler, J. P.; Grigoleto, L.; Lemos, M. V. A.; Baldi, F.; Ferraz, J. B. S. Genome Wide Association Study (GWAS) for body weight traits in Santa Ines Sheep breed. In: World Congress On Genetics Applied To Livestock Production, 2018, Auckland. Proceedings Of The World Congress On Genetics Applied To Livestock Production, Volume Genetic Gain In Challenging Environments, 2018. V. 11. P. 708-708.
- 1. Berton, M.; Amorim, S. T.; Kluska, S.; Lemos, M. V. A.; Olivieri, B.; Tonussi, R.; Peripolli, E.; Eler, J. P.; Baldi, F.; Ferraz, J. B. S.Genetic Parameters and Genome Wide Association Study (GWAS) for maternal related traits in Santa Ines Sheep breed. In: World Congress On Genetics Applied To Livestock Production, 2018, Auckland. Proceedings Of The World Congress On Genetics Applied To Livestock Production, Volume Electronic Poster Session Species Ovine, 2018. V. 11. P. 826-826.

## CONFERENCE ABSTRACTS

- 11. Bi, Y.; Kadlec, R.; Castro, K.; Indest, S.; Amorim, S. T.; Morota, G. Development of Automated Computer Vision Systems for Evaluating Dairy cow Body Weight and Body Condition Scores. In: The American Society of Animal Science. Journal of Animal Science, Volume 100, Issue Supplement<sub>3</sub>, 2022.
- 10. Leite, A. A.; Amorim, S. T.; Rosa, V. L.; Lemes, M.; Francisco, L.; Hauptli, L.; Irgang, R.; Lima, A. L. F. Exon IV Polymorphism Of Prolactin Gene On Crioulo Lageano Cattle. In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.
- 9. Amorim, S. T.; Leite, A. A.; Lemes, M.; Francisco, L.; Chiarelli, A. C.; Pereira, M. C.; Dalhke, F.; Lima, A. L. F.Genetic Monomorphism Of Insulin-Like Growth Hormone On Crioulo Lageano Cattle (Bos taurus). In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.
- 8. Rosa, V. L.; Amorim, S. T.; Chiarelli, A. C.; Leite, A. A.; Carvalho, S. R. S. T.; Quadros, S. A. F.; Oliveira, P.P.; Lima, A. L. F. Identification Of Polymorphisms On The IGF-I Gene In Crioulo Lageano Cattle (Bos taurus). In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.
- 7. Dalhke, F.; Dahmer, A. P.; Oliveira, P.P.; Amorim, S. T.; Hauptli, L.; Lima, A. L. F. Evaluation Of The Influence Of Astaxanthin Inclusion In Feed For Quails (Cuturnix cuturnix japonica) On Performance And Egg Quality Traits. In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A, 2017.
- 6. Oliveira, R. N.; Machado, Djonatan; Pereira, M. C.; Correa Junior, A. C.; Amorim, S. T.; Carvalho, S. R. S. T.; Quadros, S. A. F.; Lima, A. L. F. Association Between Productive Performance And Gastrointestinal Nematodes Infection In Ile De France Lambs. In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.

- 5. Wagner, B.; Amorim, S. T.; Pereira, T. C.; Irgang, R.; Lima, A. L. F.; Pereira, M. C.; Quadros, S. A. F.; Carvalho, S. R. S. T.Beef Consumers Preferences: An Approach On The Cities Of Florianopolis And Botucatu. In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.
- 4. Xavier, A. C.; Machado, Djonatan; Amorim, S. T.; Tavares, S.; Irgang, R.; Hauptli, L. Efficiency Of The Questionnaire Application Classic Swine Fever Situation In Terms Of Risks By Municipality In Santa Catarina. In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.
- 3. Amorim, S. T.; Lima, A. L. F.; Lemes, M.; Irgang, R.; Pereira, M. C.; Chiarelli, A. C. Efficiency in feed conversion in Pigs: Association of favorable alleles with nutritional modeling. In: Iniciation to Scientific Research Seminar, Florianópolis, 2017.
- 2. Machado, Djonatan; Mallmann, D. H.; Erpen, J.G.; Amorim, S. T.; Selig, P.M.; Marian, P.; Oliveira, P.P.; Hosrtmann, R. Knowledge Intensive Livestock: Knowledge Management Maturity Model Applied On Dairy Farming In Santa Catarina. In: 54<sup>a</sup> Reunião Anual Da SBZ, 2017, Foz Do Iguaçu. A New View Of Animal Science: Challenges And Perspectives, 2017.
- 1. Amorim, S. T.; Lima, A. L. F.; Bento, L. L.; Leite, A. A.; Pereira, T. C.; Pacheco, L.; Pereira, M. C.; Irgang, R. Isolation and Aplication of RFLP-PCR on ghrelin gene of Swine, In: Iniciation to Scientific Research Seminar, Florianópolis, 2017.

## ORAL PRESENTATIONS

- 7. Amorim, S. T. Implementation of Medical Subject Headings (MeSH) analysis in farm animals. Animal Sciences Seminar. Blacksburg, VA, USA, 2022.
- 6. Amorim, S. T. Collaborative Innovation. CAIA Big Event. Blacksburg, VA, USA, 2022.
- **5. Amorim, S. T. The Faces of Animal Sciences**. I SEMAZOOT Online. Florianópolis, Brazil. 2020.
- **4. Amorim, S. T. Genomic connectedness in Nellore beef cattle**. NCERA-225 Meeting for Implementation and Strategies for National Beef Cattle Genetic Evaluation. Blacksburg, VA, USA. 2019.
- 3. Amorim, S. T.; Eler, J. P.; Grigoleto, L.; Lemos, M. V. A.; Baldi, F.; Ferraz, J. B. S. Genome Wide Association Study (GWAS) For Body Weight Traits In Santa Ines Sheep Breed. World Congress on Genetics Applied to Livestock Production. Auckland, New Zealand. 2018.
- 2. Amorim, S. T.; Lima, A. L. F.; Lemes, M.; Irgang, R.; Pereira, M. C.; Chiarelli, A. C. Efficiency in feed conversion in pigs: Association of favorable alleles with nutritional modeling. Scientific Initiation Seminar. Florianópolis, Brazil. 2017.
- 1. Amorim, S. T.; Genetic Monomorphism Of Insulin-Like Growth Hormone On Crioulo Lageano Cattle (Bos taurus). Scientific Initiation Seminar. Florianópolis, Brazil. 2017.

#### TEACHING EXPERIENCE

Graduate Teaching Assistant, Virginia Tech, USA.	$2021 ext{-}Present$
Lead Instructor, Faculdades Associadas de Uberaba, FAZU, Brazil.	2022- 2022
Lead Instructor, Faculdades Associadas de Uberaba, FAZU, Brazil.	2021- 2021
Lead Instructor, Faculdades Associadas de Uberaba, FAZU, Brazil.	2021- 2021
Lead Instructor, Faculdades Associadas de Uberaba, FAZU, Brazil.	2020- 2020
Graduate Teaching Assistant, Universidade Estadual Paulista, UNESP, Brazil.	2018-2020
Teaching Assistant, Universidade Federal de Santa Catarina, UFSC, Brazil.	2015-2016
Teacher, Khan Academy Brasil Project, Brazil.	2015-2018

## GUEST LECTURES

1. DASC4475/4476 - Dairy Enterprise Management. **Principles of Genomic Evaluation**. Virginia Polytechnic Institute and State University, Blacksburg, VA, USA, September, 2022.

#### PARTICIPATION IN EVENTS

- 29. Industrial and Systems Engineering Symposium. Blacksburg, VA, USA, 2023.
- 28. Conference on Higher Education Pedagogy<sup>TM</sup>. Blacksburg, VA, USA, 2023.
- 27. Industrial and Systems Engineering Symposium. Blacksburg, VA, USA, 2022.
- 26. Empowering Farmers with Affordable Digital Agricultural Solutions. Blacksburg, VA, USA, 2021.
- 25. I Virtual Meeting on Innovations in Animal Production. Online Meeting. 2020.
- **24.** II Symposium on Conservation and Sustainable Management of Domestic Breeds in Danger. Online Meeting. 2020.
- 23. I COICTA International Online Congress of Food Science and Technology "Food Security: Strategies in the Pandemic Period. Online Meeting. 2020.
- 22. NCERA-225 Meeting for Implementation and Strategies for National Beef Cattle Genetic Evaluation. Christiansburg, VA, USA. 2019.
- 21. World Congress on Genetics Applied to Livestock Production. Auckland, New Zealand. 2018.
- 20. 54th Annual Meeting of the Brazilian Society of Animal Science. Foz do Iguaçú, Brazil. 2017.
- 19. The Buffalo Meat. Florianópolis, Brazil. 2017.
- 18. Ambient and Thermal Comfort in Pigs. Florianópolis, Brazil. 2017.
- 17. Evaluation of Carcass and Quality of Sheep meat. Florianópolis, Brazil. 2017.
- 16. Brucellosis and Bovine Tuberculosis. Florianópolis, Brazil. 2017.
- 15. Linear classification for types in Cattle. Florianópolis, Brazil. 2017.
- 14. Productive efficiency in Beef Cattle for meat quality. Florianópolis, Brazil. 2017.
- **13.** Avian physiology, intestinal microbiot and its effects on the physiology of birds. Florianópolis, Brazil. 2017.
- 12. I Porcada da Zootecnia. Florianópolis, Brazil. 2017.
- 11. Handling of Otters in Captivity. Florianópolis, Brazil. 2017.
- 10. Meat Inspection and Quality. Florianópolis, Brazil. 2017.

- 9. Short Course: Ice Cream Production. Florianópolis, Brazil. 2017.
- 8. Nutrition and Disease Control in PET. Florianópolis, Brazil. 2017.
- 7. Sheep Farming: From the field to the plate. Florianópolis, Brazil. 2017.
- 6. A Tour in the World of Pork Meat. Florianópolis, Brazil. 2017.
- 5. The use of Genomics to improve Animal Performance. Florianópolis, Brazil. 2017.
- 4. Workshop: Quality Brands in Meats Red Cyted Marcarne. Foz do Iguaçú, Brazil. 2017.
- 3. XXVI Brazilian Congress of Animal Science. Santa Maria, Brazil. 2016.
- 2. Zebu Cattle Breed Characteristics. Florianópolis, Brazil. 2015.
- 1. Scientific Initiation Seminar. Florianópolis, Brazil. 2015.

## **EVENTS ORGANIZATION**

- **5. Amorim, S. T.**; Smilnak, D.; Muller, R.; Emery, B. CAIA Big Event. Blacksburg, Virginia. 2023. (Seminar).
- **4. Amorim, S. T.**; Smilnak, D.; Muller, R.; White, R. Fact-sheet Writing Workshop. Blacksburg, Virginia. 2022. (Workshop).
- **3. Amorim, S. T.**; Pereira, T. C.; Lima, A. L. F.; Leite, A. A. I-SIAZ Semana Acadêmica Integrada de Agronomia e Zootecnia. Florianópolis, Brazil. 2015. (Seminar).
- 2. Amorim, S. T.; Pereira, T. C.; Lima, A. L. F.; Leite, A. A. I-SIAZ Semana Acadêmica Integrada de Agronomia e Zootecnia. Florianópolis, Brazil. 2015. (Seminar).
- 1. Amorim, S. T.; XI Congresso Internacional da APCG. Florianópolis, Brazil. 2013. (Congress).

## STUDENT ORGANIZATION

- 3. Center for Advanced Innovation in Agriculture (CAIA-GSA). Event Coordinator. Virginia Tech, USA. 2023-Present.
- 2. Center for Advanced Innovation in Agriculture (CAIA-GSA). Secretary. Virginia Tech, USA. 2021-2022.
- 1. Center for Advanced Innovation in Agriculture (CAIA-GSA). Treasurer. Virginia Tech, USA. 2020-2021.

#### COMPLEMENTARY EDUCATION

Modern Programming in Genome to Phenome, University of California-Davis. 2022-2022.

Programming and computer algorithms in animal breeding with a focus on single-step GBLUP and genomic selection in practice, University of Georgia. 2022-2022.

Basic Responsible Conduct of Research Course, CITI Program. 2021-2021.

Understanding and Visualizing Data with Python, University of Michigan. 2021-2021.

Python for Everybody Specialization, University of Michigan.

University Extension in Research Methods: Introductory Concepts, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2021. Credit Hours: 30h

University Extension in Knowledge Discovery in Databases: Fundamentals, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2021. Credit Hours: 20h

University Extension in Agriculture and Sustainable Rural Development, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2021. Credit Hours: 40h

Python for Genomic Data Science, Johns Hopkins University. 2020.

Introduction to Genomic Technologies, Johns Hopkins University. 2020.

University Extension in Biology, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2020. Credit Hours: 40h

University Extension in Statistics: Concepts and Representations, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2020. Credit Hours: 20h

University Extension in Statistics: Measures of Position and Dispersion, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2020. Credit Hours: 20h

University Extension in Databases: Fundamentals, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2020. Credit Hours: 20h

University Extension in Environmental Education, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2020. Credit Hours: 40h

University Extension in Hygiene and Food Quality Control, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul.

2020. Credit Hours: 50h

GWAS Workshop, Virginia Polytechnic Institute and State University.

2019. Credit Hours: 30h

Special Topics in Bioinformatics: Genome Alignment, Universidade Estadual Paulista.

2019. Credit Hours: 30h

Quantitative Genetics and Genomics Workshop, Universidade de São Paulo (ESALQ).

2018. Credit Hours: 30h

Special Topics in Genome Sequencing for Genomic Studies, Universidade Estadual Paulista.

2018. Credit Hours: 20h

Special Topics in R applied to Animal Breeding, Universidade Estadual Paulista.

2017. Credit Hours: 66h

Management and Use of Poultry and Mammals in Research, Universidade Federal de Santa Catarina.

2017. Credit Hours: 17h

## REFERENCES

- 1. Prof. Dr. Fernando Baldi Rey, Assistant Professor of Animal Breeding and Genetics, Universidade Estadual Paulista (UNESP), Brazil. Email: fernandobaldiuy@gmail.com.
- 2. Prof. Dr. Gota Morota, Associate Professor at Virginia Polytechnic Institute and State University, USA. Email: morota@vt.edu.
- **3. Prof. Dr. Fernando Biase**, Assistant Professor at Virginia Polytechnic Institute and State University, USA. Email: fbiase@vt.edu.