André Victor Ribeiro Amaral

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Education

1. **Ph.D. in Statistics**, King Abdullah University of Science and Technology. From Fall, 2020 to PRESENT. Advised by Dr. Paula Moraga.

2. **M.S. in Statistics**, Universidade Federal de Minas Gerais. From 02/2019 to 06/2020. Advised by Dr. Roger Silva.
   Dissertation title: Phase Transition Phenomenon in Percolation Models using Boolean Functions (written in Portuguese). `https://github.com/avramaral/MSDissertation`.

3. **B.S. in Statistics**, Universidade Federal de Minas Gerais. From 02/2018 to 12/2018 (Interrupted due to the Master's Program admission).

4. **B.S. in Industrial Engineering**, Pontifícia Universidade Católica de Minas Gerais. From 02/2012 to 06/2018.

Publications

1. Mahmood, M., **Amaral, A. V. R.**, Mateu, J., and Moraga, P. (2022). *Modeling infectious disease dynamics: Integrating contact tracing-based stochastic compartment and spatio-temporal risk models*. Spatial Statistics. `https://doi.org/10.1016/j.spasta.2022.100691`.

Teaching

1. **Graduate Teaching Assistant** in "Applied Statistics with R" (STAT 215), King Abdullah University of Science and Technology. Twice (Fall, 2021 and 2022). Advised by Dr. Joaquin Ortega. The material can be found in `https://avramaral.github.io/STAT215/`.

2. **Teaching Assistant** in "Applied Statistics and Data Analysis" (DSA004). This was a four-day course given to ARAMCO employees in collaboration with King Abdullah University of Science and Technology. Summer, 2022. Advised by Dr. Paula Moraga. The material can be found in `https://avramaral.github.io/aramco_course/`.

3. **Graduate Teaching Assistant** in "Contemporary Topics in Statistics" (STAT 294), King Abdullah University of Science and Technology. Fall, 2021. Advised by Dr. Paula Moraga. The material can be found in `https://avramaral.github.io/STAT294/`.

4. **Graduate Teaching Assistant** in "Statistics and Probability" (EST 031), Universidade Federal de Minas Gerais. From 02/2020 to 06/2020. Advised by Dr. Cristiano Carvalho. The material (written in Portuguese) can be found in `avramaral.github.io/AulasEstProb/`.

Conference Presentations

1. **Poster presentation** at "KAUST 2022 Workshop on Statistics". 11/2022. *Extended Excess Hazard Model for Spatially Dependent Survival Data with Applications to Cancer Research*. The poster can be found in `https://github.com/avramaral/AC/tree/main/KAUST_2022_STAT_WORKSHOP`.

2. **Talk** and **poster presentation** at "JSM 2022". 08/2022. *Integrating Compartment and Point Process Models for Spatio-Temporal Modeling of Infectious Diseases*. The slides and poster can be found in `https://github.com/avramaral/AC/tree/main/JSM_2022`.

3. **Talk** at "GeoEnv 2022". 06/2022. *Spatio-temporal Point Process Compartment Modeling for Infectious Diseases*. The slides can be found in `https://github.com/avramaral/AC/tree/main/GeoEnv_2022`.

4. **Poster presentation** at "METMA X". 06/2022. *Assessing the Effect of Model-based Geostatistics Under Preferential Sampling for Spatial Data Analysis*. The poster can be found in `https://github.com/avramaral/AC/tree/main/METMA_X`.

5. **Talk** at "ENAR 2022". 03/2022. *Modeling Infectious Disease Dynamics: Integrating Contact Tracing-based Stochastic Compartment and Spatio-temporal Risk Models*. The slides can be found in `https://github.com/avramaral/AC/tree/main/ENAR_2022`.

6. **Poster presentation** at "TWAS 15$^{\text{th}}$ General Conference". 11/2021. *Modeling Infectious Disease Dynamics: Integrating Contact Tracing-based Stochastic Compartment and Spatio-temporal Risk Models*. The poster can be found in `https://github.com/avramaral/AC/tree/main/TWAS_15`.

Honors and Awards

1. **CEMSE Dean's List Award**, by King Abdullah University of Science and Technology. Academic year 2021/2022.

2. **Graduate Fellowship**, by King Abdullah University of Science and Technology (KAUST). From Fall, 2020 to PRESENT.

   The Fellowship is a competitive grant awarded to graduate students at KAUST. The grant consisted of direct research costs and living expenses. Under the supervision of Professor Dr. Paula Moraga, I have been working on the development of innovative statistical methods for geospatial data analysis with applications in health surveillance.

3. **Undergraduate Scholarship**, by Brazil's "Science without Borders" Program. From 07/2016 to 12/2017.

   The Scholarship was granted to excellent students from Brazil who wanted to complete part of their undergraduate education in other Educational Institutions overseas. It covered tuition and living expenses. I completed the program as a student at Curtin University (Australia).

Participation and Attendance

1. Gaussian Process Modeling, Design, and Optimization. Professional Development Continuing Education Course at "JSM 2022". 08/2022.

2. 13$^{\text{th}}$ Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID). 07/2021. I attended the following modules
   2.1. Module 7: Simulation-Based Inference for Epidemiological Dynamics.
   2.2. Module 9: Contact Network Epidemiology.
   2.3. Module 12: Statistics and Modeling with Novel Data Streams.

3. València International Bayesian Analysis Summer School, 4$^{\text{th}}$ Edition (VIBASS4). 07/2021.

4. Duke Machine Learning Virtual Summer School 2021. 06/2021.

Miscellaneous

1. **Student Ambassador** in the *Computer, Electrical, and Mathematical Science and Engineering* (CEMSE) division at King Abdullah University of Science and Technology (KAUST). Academic year 2022/2023.

   As a representative of the Statistics Program at KAUST, I helped in communicating the program to prospective students and answered their questions.