André Victor Ribeiro Amaral

avramaral@gmail.com
www.avramaral.com/
github.com/avramaral/

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 Professor Dr. Paula Moraga's supervision, 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. Three-week visiting period at University College London (England) under Dr. Javier Rubio's supervision. 10/2022.

   During this time, we worked on the development of a fully parametric statistical method for survival data analysis. In particular, we modeled the hazard function for cancer-diagnosed patients assuming unknown causes of death (also known as "relative survival framework"), and spatial autocorrelation.

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

3. 13^{th} Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID). 07/2021. I attended the following modules

   3.1. Module 7: Simulation-Based Inference for Epidemiological Dynamics.
   3.2. Module 9: Contact Network Epidemiology.
   3.3. Module 12: Statistics and Modeling with Novel Data Streams.

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

5. 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 answering their questions.