

## EDUCATION

Rice University, Houston, TX

**Ph.D. in Statistics**

**M.S. in Statistics**

Thesis: "Bayesian Applications to Clinical Trials and Survival Analysis"

Honors: Qualifying exam passed "with distinction"

**2014-2018**

Louisiana State University, Baton Rouge, LA

**Masters of Applied Statistics M.Ap.St.**

Thesis: "Assessment of Simon and Price models for predicting citation accumulation"

**2012-2014**

Louisiana State University, Baton Rouge, LA

**B.S. in Mathematics**

Area of Concentration: Statistics

**2008-2012**

## AWARDS

T32: Cancer Training Grant

2014 – 2016

OFDA 2016 Scholarship

2016 – 2017

O'Bayes Conference Travel Award

2017

## PUBLICATIONS AND PAPERS

Chapple, A.G., Blackston, J.W. (2019). Finding benefit in n-of-1 trials. *JAMA Intern Med.* 179(3):453-454.

Christensen, B.J., Chapple, A.G., King, B.J. (2019). What is the Effect of Treating Mandibular Fractures on Weight and Prealbumin? *Journal of Oral and Maxillofacial Surgery.* 77 (6): 1-6.

Peak, T., Su, Y., Chapple, A.G., Chryr,, J., Pollack, J., Deep, G. (2019). Syntaxin 6: A novel predictive and prognostic biomarker in papillary renal cell carcinoma. *Scientific Reports.* 9 (1): 3146.

Chapple, A. G., Wojcik, J. J., & McDaniel, L. S. (2019). A regression based phase I clinical trial for late-onset toxicities without clinician elicitation. *Contemporary clinical trials communications,* 14, 100327. doi:10.1016/j.conctc.2019.100327

Christensen, B.J., Chapple, A.G., King, B.J. (2018). How much weight loss can be expected after treating mandibular fractures? *Journal of Oral and Maxillofacial Surgery.*

Peak, T., Russell, G.B., Dutta, R., Rothberg, M., Chapple, A.G., Hemal, A.K. (2018). An NCDB-based Nomogram to Predict Lymph Node Metastasis in Penile Cancer. *BJU International.* 123. 10.1111/bju.14652.

Chapple, A.G., Thall, P.F. (2018). A hybrid phase I-II/III clinical trial design allowing dose re-optimization in phase III. *Biometrics.* 1– 11. <https://doi.org/10.1111/biom.12994>

Peak T.C., Chapple, A.G., Coon, G., Hemal, A. (2018). Utilizing a Semi-Competing Risk Model to Predict Perioperative and Oncologic Outcomes after Radical Cystectomy. *British Urology Journal.* 10 (11): 317-326

Chapple, A.G., Thall, P.F. (2018). Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination. *Journal of Pharmaceutical Statistics.* 1-16.

Chapple, A.G. (2018). Modeling ISIL terror attacks and their fatality rates with a Bayesian reversible jump marked point process. *Journal of Economics and Econometrics. Economics and Econometrics Society.* 61(3): 1-14.

Chapple, A.G., Vannucci, M., Thall, P.F., Lin, S.H. (2017). Bayesian variable selection for a semi-competing risks model with three hazard functions. *Journal of Computational Statistics and Data Analysis.* 112: 170-185.

Liru, H., Chapple, A.G., Liao, Z., Komaki, R., Thall, P.F., Lin SH. (2016) Bayesian regression analyses of radiation modality effects on pericardial and pleural effusion and survival in esophageal cancer. *Journal of Radiation Oncology.* 121 (1): 70-74.

Chapple, A. (2016) A Bayesian Reversible Jump Piecewise Hazard approach for modeling rate changes in mass shootings. *Journal of Economics and Econometrics*. 59 (3). 19-31.

Han, K.J., Pitman, W.D., Chapple, A. (2014). Moisture Concentration Variation of Silages Produced on Commercial Farms in the South-Central USA. *Asian-Australasian Journal of Animal Sciences*. 2014;27(10):1436-1442.

#### SOFTWARE AVAILABLE ON CRAN

**BayesPieceHazSelect:** Bayesian variable selection on covariates in a cox-like hazard with a piecewise exponential baseline hazard. <https://cran.r-project.org/web/packages/BayesPieceHazSelect/BayesPieceHazSelect.pdf>

**BayesPiecewiseICAR:** Fits a piecewise exponential model to survival data. <https://cran.r-project.org/web/packages/BayesPiecewiseICAR/BayesPiecewiseICAR.pdf>

**SimSCRPiecewise:** Simulates survival data from piecewise hazards. <https://cran.r-project.org/web/packages/SimSCRPiecewise/SimSCRPiecewise.pdf>

**SCRSELECT:** Implements the SVSS and DIC-Tau\_g procedures from the paper: Bayesian variable selection for a semi-competing risks model with three hazard functions. <https://cran.r-project.org/web/packages/SCRSELECT/SCRSELECT.pdf>

**SubTite:** Implements Sub-TITE dose finding in phase I clinical trials and provides functions for simulating these trials. <https://cran.r-project.org/web/packages/SubTite/SubTite.pdf>

**PieceExplIntensity:** Bayesian reversible jump MCMC for a marked Poisson point process. <https://cran.r-project.org/web/packages/PieceExplIntensity/PieceExplIntensity.pdf>

**Phase123:** Contains functions for implementing and simulating Phase I-II/III clinical trials. <https://cran.r-project.org/web/packages/Phase123/Phase123.pdf>

#### TEACHING EXPERIENCE

Louisiana State University School of Public Health, New Orleans, LA  
**Assistant Professor** **2018-present**  
Courses Taught/Teaching: BIOS 6318-Nonparametric Statistics; BIOS 6310- Applied Biostatistics;

Rice University, Houston, TX  
**Teaching Assistant** **2014-2016**  
I taught introductory labs on using R for homework assignment and gave bi-weekly review lectures for an introductory probability and statistics class. I wrote and graded assignments for an applied stochastic processes class on generating functions.

Louisiana State University, Baton Rouge, LA  
**Lab Lecturer** **2012-2014**  
I taught 8 undergraduate labs on how to use SAS enterprise guide. Held problem sessions for undergraduate students. Taught one graduate lab on how to use SAS to perform analyses learned in class, writing and grading each lab assignment.

#### RELATED EXPERIENCE

Louisiana State University Health Science Center, New Orleans, LA  
**Assistant Professor** **2018 – present**  
I research survival analysis and clinical trials and teach lectures to PhD students in Biostatistics.

MD Anderson, Houston, TX  
**Trainee** **2015 – 2018**  
I performed statistical research for medical applications under the supervision of Dr. Peter Thall. First we worked with Dr. Steven Lin on one application and one methodology paper involving semi-competing risks data. I took Dr. Thall's Bayesian clinical trial course in spring 2016, afterwards we developed two novel clinical trials, both of which have been published.

The Daily Reveille, Baton Rouge, LA  
**Sports Writer** **Fall 2011**

I covered all LSU fall sports but was specifically the beat writer for cross country and track. I pitched several story ideas to my managers each week, interviewed relevant sources, and wrote articles in a timely manner for print.

Volunteers in Public Schools, Baton Rouge, LA

**Math Tutor**

**2009 – 2011**

I tutored children in second and third grade who had fallen behind in math, developing advisor-mentee friendships seeing major improvements in their ability and confidence.

Episcopal High School, Baton Rouge, LA

**Middle School Track Coach**

**2009 – 2010**

I was the head boys coach for two middle school teams but particularly worked with quarter milers. I developed workouts for each day, taught relay exchanges, and encouraged the kids to succeed in track and life.

**RELEVANT SKILLS**

Coding proficiency in SAS, R and C++. Experience using clusters with putty and bash scripts. Proficiency using programs for developing clinical trials including East and several applications found on MDAnderson's website. Experience editing Wikipedia content. Proficiency in Excel and other Microsoft office programs.

**MEMBERSHIPS**

American Statistical Association: Houston Chapter  
Society of Clinical Trials

**INVITED AND CONTRIBUTED TALKS**

- MD Anderson Cancer Center (June, 2017): Bayesian variable selection for a semi-competing risks model with three hazard functions.
- MD Anderson Cancer Center (June, 2018): A Hybrid Phase I-II/III Clinical Trial Design Allowing Dose Re-Optimization in Phase III.
- Louisiana Chapter of the ASA (November, 2018). Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination.
- ENAR Annual Meeting (March, 2019): Bayesian variable selection for a semi-competing risks model with three hazard functions.
- Society of Clinical Trials Annual Meeting (May, 2019): A Hybrid Phase I-II/III Clinical Trial Design Allowing Dose Re-Optimization in Phase III.
- Bayesian Causal Inference Workshop (June, 2019). Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination.
- iBRIGHT conference at MDAnderson (November, 2019): Subgroup-specific dose finding in phase I clinical trials based on time to toxicity allowing adaptive subgroup combination.