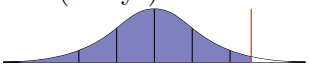
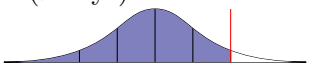
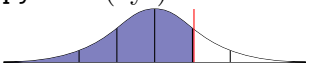
Reece Boston, Ph.D. Physics

numerical astrophysics researcher

seeking complex coding challenges

tel: 770.355.0261
email: reece@thebostons.us
github: rboston628
linkedin: reece-boston

- C++ (>10yr) 
- R (>10yr) 
- python (3yr) 

- Misc.: SQL, git, GNU/Linux, bash, fortran, Java, HTML, Objective-C, x86 assembler.

Work Experience

R&D Data Scientist at Community, Sept 2021 - Present

- analyze big data for product insights using causal inference and market archetyping
- work on team with data engineering to transform databases for data lakehouse [dbt]
- present key findings to stakeholders in product and finance

Technology: python [pandas, numpy, sklearn, spaCy]; github; Snowflake SQL; Docker; AWS.

Research Assistant at University of North Carolina, Fall 2016 - Spring 2022

- conducted scientific research leading to original publications
- created original research code in C++ within Linux environment using GNU tools
- designed, built, tested and documented project during all development stages
- integrated with legacy and modern fortran code (e.g. `GYRE`, `WDEC`, `MESA`, and `ZAMS`)

Technology: C++ [gcc, STL, MPI multithreading, make]; bash scripting; github; fortran.

Physics Instructor at University of North Carolina, Summer 2019, 2020

- communicated complex topics to non-experts in life sciences, with glowing evaluations
- recorded many of the online lectures for COVID-19 response (Lec 7-10,14,26-27)

Research Codes

`GRPulse`: High-precision asteroseismology code for Newtonian and relativistic stellar models.

`Thrain`: Astrophysics code to create simple white dwarf stars.

Research Publications

- Boston, S. Reece, *Newtonian and Relativistic White Dwarf Asteroseismology*, Ph.D. dissertation, UNC, (2022).
- Boston, S. Reece, C. R. Evans and J. C. Clemens, "The limits of Newtonian white dwarf asteroseismology." Astrophysical Journal, (2022) [Awaiting Submission].
- de Souza, Rafael, S. Reece Boston, Alain Coc, and Christian Iliadis, "Thermonuclear fusion rates for tritium+deuterium using Bayesian methods." Physical Review C, (2018).
- Boston, S. Reece, "Time travel in transformation optics." Physical Review D, (2015).

Ph.D., Physics University of North Carolina, 2022

M.S., Physics University of Georgia, 2015

B.S., Mathematics and Physics Georgia College, 2010