Cameron Fraize

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CONTACT
INFORMATION

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PRESENT
POSITION

Teaching Assistant and Graduate Student, University of Florida, 2016-Present

EDUCATION

University of Florida

B.S. in Mathematics, May 2016

- Minor in physics

RESEARCH
INTERESTS

Computability, model theory, and set theory (in particular, algorithmic randomness and large cardinals); topological data analysis.

RESEARCH
EXPERIENCE

Department of Mathematics University of Florida, Gainesville, FL
Undergraduate Honors Research   2015-2016
Research adviser: Dr. Christopher Porter

- Characterization of the number of binary strings of a given generalized length, corresponding to Bernoulli p-measures on Cantor space for p satisfying $p^k = 1 - p$ for positive integers k.
- Generalization of Kolmogorov (both plain and prefix-free) complexity and the Kraft-Chaitin theorem to a special class of "generalized length functions" corresponding to the above Bernoulli p-measures on Cantor space.
- Generalization of the Levin-Schnorr theorem to characterize Martin-Löf randomness with respect to these measures, with respect to a differing "input" measure (by which we determine shortest generating strings) and the "output" measure (by which we measure the length of initial segments of a binary sequence).

PUBLICATIONS
AND PREPRINTS

"Kolmogorov Complexity and Generalized Length Functions" (with Christopher Porter, preprint).

SELECTED
LECTURES

"Kolmogorov Complexity and Generalized Length Functions", University of Florida, Gainesville, April 2016.

GRADUATE
COURSEWORK

❑ Mathematical Logic
❑ Topology

EXTRA-
CURRICULARS

University Math Society: Director of Intellectual Affairs, 2015-2016.
UF Student Government: Students Party Senatorial Candidate, 2013.

RELEVANT
SKILLS

Languages: English, Russian (basic)

REFERENCES

Christopher Porter, Associate Professor, Department of Mathematics, Drake University, (515)-271-3041, christopher.porter@drake.edu