Roy (Joe) Joseph Clayton

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EDUCATION

University College London (UCL) — London, UK
MSc: *Physics* — 2020 - 2021
Distinction

Wesleyan University — Middletown, CT, USA
BA: *Mathematics & Physics* — 2016 - 2020
Student-Athlete, Dean's List: 2019, 2020

WORK EXPERIENCE

Virtu Financial — London, UK
Intern — Summer 2021

- One of six interns working within Execution Services
- Projects relating to analysis of dark liquidity and ETF volumes statistics
- Strong emphasis on SQL and Python/Pandas

University College London (UCL) — London, UK
Graduate Research Assistant - Rosta Research Group — 2020 - 2021

- Research interests include dynamical coarse-graining techniques
- Findings were featured in a submitted publication [1]

Wesleyan University — Middletown, CT, USA
Tutor - Dean's Peer Tutoring Program — 2018-2020

- Modules: Multivariable Calculus, Quantum Mechanics I, Calculus II, Differential Equations, Linear Algebra
- Implemented individualized weekly two-hour to cover coursework problems

Undergraduate Research Assistant - Ellis Quantum Fluids Lab — 2018-2019

- Researching the effects of torque applied by an overhanging piezoelectric system

RELEVANT PROJECTS

MSc Physics Research Thesis — 2021
Markov State Models: Variational Coarse-Graining and the Kemeny Constant

- Investigation of a dynamic coarse-graining of Markovian kinetic systems
- Proposal of a novel expression for the optimal clustering of an arbitrary system
- Numerical validation using MATLAB

Statistical Analysis — 2020
The Impact of "Food on the Move" on Consumption of Fruits and Vegetables by Rhode Islanders

- Statistical analysis on behalf of the Rhode Island Public Health Instittue

Computational Physics — 2019
Two Dimensional Atomic Interaction Modelling

- Simulation of particle interactions using Monte Carlo techniques

PUBLICATIONS

[1] V. Koskin.; A. Kells.; J. Clayton; A. Annibale; E. Rosta;. Variational kinetic clustering of complex networks. *J. Chem. Phys.*, 2021

LANGUAGES

English (native), French (conversational)

PROGRAMMING LANGUAGES

Python, C/C++, LaTeX, MATLAB, SQL