

# Niuniu Zhang

Email: [first name] [at] sas.upenn.edu

URL: <https://niuniu-zhang.github.io>

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## Education

May 2023	University of Pennsylvania, MA Applied Mathematics (AMCS), Philadelphia, PA
May 2021	New York University, MA Visual Arts Administration, New York, NY
June 2019	Union College, BS Mathematics and French, Minor in Visual Arts, Schenectady, NY

## Articles

### UNDER REVIEW / WORKING PAPERS

1. [“NFT Wash Trading: Direct vs. Indirect Estimation”](#), Falk, B., Tsoukalas, G., and Zhang, N. (2023)
2. [“Economics of NFTs: The Value of Creator Royalties”](#), Falk, B., Gu, B., Tsoukalas, G., and Zhang, N. (2022)
  - selected and presented at March 2023 Symposium of Crypto & Blockchain Economics Research Forum (CBER). [\[video\]](#)

### THESES

3. [“Being An Artist Is Hard: Navigating the Dynamics of Money and Power”](#), Zhang, N. (2021)
4. [“Category Theory and Universal Property”](#), Zhang, N. (2019)
5. [“La Nouvelle Vague est-elle un cinéma existentialiste français?”](#), Zhang, N. (2019)

## Research Experience

### PENN ENGINEERING, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA

2022-2024 Research Assistant, [Crypto and Society Lab \(CASL\)](#)  
Advised by Prof. [Brett Hemenway Falk](#) and Prof. [Gerry Tsoukalas](#)  
I conducted empirical analysis of blockchain data and developed economic models to fit the data, with topics including NFT royalties and wash trading. See [\[1,2\]](#).

### PENN ART & SCIENCE, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA

2023-2024 Research Assistant, [Department of History](#)  
Advised by Prof. [Maylis Avaro](#) and Prof. [Marc Flandreau](#)  
I analyzed Ethereum-based trading platforms, e.g., Uniswap and Curve, to investigate potential ripple effects of the 2022 Terra market crash.

STEINHARDT SCHOOL, NEW YORK UNIVERSITY, NEW YORK, NY

2020-2021

Master's Thesis, [Department of Art and Art Professions](#)

Advised by Prof. [Amy Whitaker](#)

I investigated the economic challenges artists face and the transformative potential of blockchain for creative careers. See [\[3\]](#).

## Teaching Experience

PENN ENGINEERING, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA

Sp. 2024

Teaching Assistant, [EAS 5830 Blockchains](#), Graduate

Supervised by Prof. [Brett Hemenway Falk](#)

Sp. & F. 2022

Teaching Assistant, [CIS 5150 Fundamentals of Linear Algebra and Optimization](#), Graduate

Supervised by Prof. [Jean Gallier](#)

## Awards & Honors

2019

summa cum laude, Union College

2019

Phi Beta Kappa Inductee, Academic Honor Society

2019

Departmental Honors in Mathematics and in French, Union College

2019

Pi Delta Phi Inductee, French Honor Society

## Technical Skills

Python, C, C++, Bash, Mathematica, MATLAB, R,  $\LaTeX$