

Clayton Seitz

cwseitz@uchicago.edu

OBJECTIVE	To perform research in artificial intelligence, using dynamical models from statistical physics and interpretations from information theory and computer science	
EDUCATION	<i>Graduate Coursework,</i> University of Chicago, Chicago, IL Deep Learning, Information Theory, and Theoretical Neuroscience <i>Bachelor of Science, Physics</i> Purdue University, Indianapolis, IN, 2019 Minor: Mathematics <i>Bachelor of Science, Informatics</i> Luddy School of Informatics, Computing, and Engineering, Indiana University Bloomington, 2019 Concentration: Mathematics	
SUPP. EDUCATION	<i>Graduate Coursework,</i> Algorithms, Computer Architecture, Princeton University Foundations, Modular Programming, Memory Management, Pointers, Advanced Data Types	
COMPUTER SKILLS	<i>Languages & Software:</i> Python, C/C++, MySQL, MATLAB, Git, LaTeX, Bash	
EXPERIENCE	<i>Research Software Developer</i> 2019-2021 Indiana University, Indianapolis, IN <ul style="list-style-type: none">• Develop an image processing software pipeline for high-throughput quantification of images in fluorescent microscopy• Utilize high performance computing clusters for image segmentation, single particle tracking, and image registration <i>Undergraduate Researcher</i> 2019-2020 <ul style="list-style-type: none">• Utilize time-correlated single photon counting (TCSPC) to characterize the sub-Poissonian emission of organic quantum dots dispersed in a thin film of poly-methyl methacrylate (PMMA)• Design and utilize a 3-color imaging protocol to perform single-molecule imaging of mRNA transcripts in human epithelial kidney and osteosarcoma cells <i>Undergraduate Tutor</i> 2018-2019 <ul style="list-style-type: none">• Tutored undergraduate students in introductory physics courses covering classical mechanics, classical electromagnetism, circuit analysis, and modern physics	
AWARDS	<i>PS-ON Annual Investigator Meeting Travel Award</i> 2019 Purdue University, Indianapolis, IN <i>Hudson and Holland Scholarship for Diversity and Inclusion</i> 2013-2017 Indiana University, Bloomington, IN	

<i>Founders Scholar</i> Indiana University, Bloomington, IN	2013-2017
<i>Cigital Scholarship</i> Indiana University, Bloomington, IN	2016-2017
<i>Dean's List</i> Indiana University, Bloomington, IN	2013-2019

PUBLICATIONS Seitz C., Lin H., Vidi P., Bonin K., and Liu, J. (2019). *Investigating the chromatin mobility in response to DNA damage by single molecule imaging*. Unpublished Manuscript, Department of Physics, IUPUI, Indianapolis, IN, United States.

Seitz C., Lin H., and Liu, J. (2019). *Intranucleus Single Molecule Tracking*. Unpublished Manuscript, Department of Physics, IUPUI, Indianapolis, IN, United States

Seitz C., Lin H., Prajapati S., Bonin K., Vidi P., and Liu, J. (2019). *Spatiotemporal Quantification of Radiation-Induced 53BP1 Foci in Human Epithelial Cells*, poster, NIH/NCI PS-ON Annual Investigators Meeting. Minneapolis, MN, United States.

Seitz C., Reeser A., Li F., and Liu, J. (2019). *Machine Learning Methods in Image-Based Transcriptomics at Single Molecule Resolution*, poster, IUPUI Undergraduate Research Symposium, Indianapolis, IN, United States.