

Clayton Seitz

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OBJECTIVE	To become an inventor at the interface of computer science and physics with a focus on neural systems	
EDUCATION	<i>Doctor of Philosophy</i> , Biophysics University of Chicago, Chicago, IL, Expected 2025 Focus: Neural networks	
	<i>Bachelor of Science</i> , Physics Purdue University, Indianapolis, IN, 2019 Minor: Mathematics	
	<i>Bachelor of Science</i> , Informatics Indiana University, Bloomington, IN, 2019 Concentration: Mathematics	
COMPUTER SKILLS	<i>Languages & Software</i> : Python, C/C++, MATLAB	
EXPERIENCE	<i>Research Programmer</i>	2019-2021
	Indiana University, Indianapolis, IN	
	<ul style="list-style-type: none">• Develop an image processing/computer vision, and machine learning software package for systematic quantification of fluorescent images of cells and tissues• Utilize high performance computing clusters for high-throughput image segmentation, single particle tracking, and image registration• Perform fluorescence in-situ hybridization in paraffin sections of the left hemisphere of the mouse brain followed by fluorescence imaging via a home-built single molecule imaging system	
	<i>Undergraduate Researcher</i>	2019-2020
	<ul style="list-style-type: none">• Utilize time-correlated single photon counting to characterize the sub-Poissonian emission of organic quantum dots dispersed in a thin film of poly-methyl methacrylate• Design and utilize a 3-color imaging protocol to perform single-molecule imaging of mRNA transcripts in human epithelial kidney and osteosarcoma cells	
AWARDS	<i>Undergraduate Tutor</i>	2018-2019
	<ul style="list-style-type: none">• Tutored undergraduate students in introductory physics courses covering classical mechanics, classical electromagnetism, and modern physics	
	<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>	2013-2017
	Indiana University, Bloomington, IN	

Digital Scholarship
Indiana University, Bloomington, IN

2016-2017

Dean's List
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 Unpublished Manuscript, Department of Physics, IUPUI, Indianapolis, IN, United States.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.