

William Raymond

Personal

Mailing address: 2302 Clipper Way, Fort Collins CO, 80524
Email: williamscottraymond@gmail.com
Phone: 701-570-8305
Website: https://will-raymond.github.io/will_raymond_cv/

Education

Doctorate of Philosophy - Bioengineering
Colorado State University
Fort Collins, Colorado Dissertation: Stochastic modeling to explore the Central Dogma of molecular biology and to design more informative single-molecule live-cell fluorescence microscopy experiments.

Bachelor of Science - Chemical and Biological Engineering
Bachelor of Science - Biomedical Engineering
Colorado State University
Fort Collins, Colorado

Peer-Reviewed Publications

Aguilera LU, Weber L, Ron E, King CR, Kaan O, Poppinga A, Cook J, May MP, Raymond WS, Fox ZR, Forero-Quintero LS, Forman J, David A, and Munsky B. Methods in Quantitative Biology – from Analysis of Single-Cell Microscopy. UNDER REVIEW.

Raymond WS, DeRoo J, and Munsky B. Identification of potential riboswitch elements in Homo Sapiens mRNA 5'UTR sequences using Positive-Unlabeled machine learning. UNDER REVIEW.

Raymond WS, Ghaffari S, Aguilera LU, Ron E, Morisaki T, Fox ZR, May MP, Stasevich TJ, and Munsky B. Using mechanistic models and machine learning to design single-color multiplexed nascent chain tracking experiments. *Frontiers in Cell and Developmental Biology*. 11, 2023. doi: 10.3389/fcell.2023.1151318

Forero-Quintero LS, Raymond WS, Munsky B, and Stasevich TJ. Visualization, quantification and Modeling of Endogenous RNA Polymerase II Phosphorylation at a Single-copy Gene in Living Cells. *Bio-protocol*. 12(14) 2022. doi: 10.21769/BioProtoc.4482.

Forero-Quintero LS, Raymond WS, Handa T, Saxton MN, Morisaki T, Kimura H, Bertrand E, Munsky B, and Stasevich TJ. Live-cell imaging reveals the spatiotemporal organization of endogenous RNA polymerase II phosphorylation at a single gene. *Nature Communications*. 12(1):3158 2021. doi: 10.1038/s41467-021-23417-0.

Aguilera LU, Raymond WS, Fox ZR, May MP, Djokic E, Morisaki T, Stasevich TJ, and Munsky B. Computational design and interpretation of single-RNA translation experiments. *PLOS Computational Biology*. 15(10) 2019. doi: 10.1371/journal.pcbi.1007425.

Weber L, Raymond WS, and Munsky B. Identification of gene regulation models from single-cell data. *Physical Biology*. 15(5) 2018. doi: 10.1088/1478-3975/aabc31.

Teaching Positions

Course Instructor
BIOM 421 - Transport Phenomena

Colorado State University
Fort Collins, Colorado
Jan 2023 - May 2023

Learning Assistant
UQ-Bio summer school
Colorado State University
Fort Collins, Colorado
Summer 2021, 2022, 2023 & 2024

Graduate Teaching Assistant
BIOM 421 - Transport Phenomena
Colorado State University
Fort Collins, Colorado
Fall 2020, Fall 2021

Professional Positions

Research Assistant
Colorado State University
Fort Collins, Colorado
Sept 2017 - Aug 2018

Undergraduate Research Assistant
Colorado State University
Fort Collins, Colorado
Fall 2016 - Summer 2017

Volunteer Positions

Guest Judge CSU Gradshow
Colorado State University
Fort Collins, Colorado
Fall 2024

Engineering Mentor
Colorado State University
Fort Collins, Colorado
Fall & Spr 2014

Speaker Presentations

Raymond WS et al. Combining mechanistic and statistical models to enable Nascent Chain Tracking for multiple mRNAs using a single color. UQ-Bio Summer School. Fort Collins Colorado. June 2023.

Raymond WS et al. Combining mechanistic and statistical models to enable Nascent Chain Tracking for multiple mRNAs using a single color. APS March Meeting. Las Vegas, Nevada. June 2023.

Conference Poster Presentations

Raymond WS et al. Identification of Potential Riboswitch Elements in Homo Sapiens 5'UTR Sequences using Positive-Unlabeled Machine Learning. qCMB Symposium. Fort Collins, Colorado. June 2024.

Raymond WS et al. Identification of Potential Riboswitch Elements in Homo Sapiens 5'UTR Sequences using Positive-Unlabeled Machine Learning. Rocky Mountain RNA Symposium. Aurora, Colorado. April 2024.

Raymond WS et al. Combining mechanistic and statistical models to enable Nascent Chain Tracking for multiple mRNAs using a single color. qCMB Symposium. Fort Collins, Colorado. June 2023.

Awards

Outstanding Graduate Student
Colorado State University
Fort Collins, Colorado
Spring 2023