

JAN CROSS-ZAMIRSKI

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SUMMARY

I am PhD student under the supervision of Professor Carola-Bibiane Schönlieb in the Cambridge Image Analysis group at DAMTP, University of Cambridge. We collaborate with the AstraZeneca QBio group.

My research interests include using multi-modal data and image metadata to adapt and enhance models in applied computer vision tasks. My work includes self-supervised learning, representation learning and image-to-image models applied to cell microscopy data for drug discovery.

EDUCATION

Cambridge Image Analysis Group, DAMTP, University of Cambridge *2018 - 2022*

Ph.D. Candidate

Supervisors: [Professor Carola-Bibiane Schönlieb](#), [Dr. Yinhai Wang](#)

Natural Sciences - Physics, University of Cambridge *2017 - 2018*

Master of Science (MSci), Part III

Research Project: [Machine Learning Tools for Predicting Cognitive Health](#) with [Professor Zoe Kourtzi](#)

Director of Studies: [Professor Pietro Cicuta](#)

Natural Sciences - Physics, University of Cambridge *2014 - 2017*

Bachelor of Arts (BA), Part II

Projects: [Computational](#), [Experimental](#)

Director of Studies: [Professor Mark Warner](#)

EXPERIENCE

AstraZeneca *January 2019 -*

Quantitative Biology research group

Bank of America Merrill Lynch *June 2017 - August 2017*

Summer Analyst. Equities electronic trading, portfolio and ETF trading

BNP Paribas *June 2016 - September 2016*

Summer Analyst. Automated market making, fixed income flow trading

Isaac Physics *August 2013 - September 2014*

Content creator at <https://isaacphysics.org/>

PUBLICATIONS AND PREPRINTS

Self-Supervised Learning of Phenotypic Representations with Weak Labels

Accepted to LMRL at NeurIPS 2022 (2022).

Jan Cross-Zamirski, Elizabeth Mouchet, Guy Williams, Carola-Bibiane Schönlieb, Riku Turkki & Yinhai Wang <https://arxiv.org/abs/2209.07819>

Label-Free Prediction of Cell Painting from Brightfield Images

Sci Rep 12, 10001 (2022).

Jan Cross-Zamirski, Elizabeth Mouchet, Guy Williams, Carola-Bibiane Schönlieb, Riku Turkki & Yinhai Wang <https://www.nature.com/articles/s41598-022-12914-x>

SELECTED AWARDS

UKRI-BBSRC DTP Studentship Award

2018 - 2022

Fully Funded Ph.D. studentship from the BBSRC, supported by AstraZeneca.

Total award value: £100,000

Hawks Charitable Trust Recipient

2019 - 2022

Awarded annually for academic and sporting excellence while competing for CUCC and CUAC.

Total award value: £1000

Corpus Project Prize for Natural Sciences (Physics)

2018

For those in their final year who achieved first-class marks for a dissertation or project

Total award value: £150

Full Blue

2018 - 2021

Cambridge University Cricket Club (CUCC).

Full Blue and First Class debut

Academic Scholar

2006 - 2013

Academic Scholar at the Perse School

TALKS AND CONFERENCES

NeurIPS 2022

November-December 2022

Selected to give talk and present poster at LMRL workshop. Main conference attendee.

AstraZeneca PhD Student Symposium

April 2021

Presented poster

CytoData2020, MICCAI 2020

October 2020

Attendee

MedTech Boost - Cambridge MemTech

September 2019

Awarded [prize](#) for the best impact on healthy ageing with innovative solutions for early detection of dementia.

TEACHING

Undergraduate Supervisor

2019 - 2020

Natural Sciences Tripos, University of Cambridge.

Supervised the Mathematical Biology course at Jesus College and St. Catharine's College.

Freelance Tutor

2014 -

A-Level Mathematics and Physics, university admissions tutoring, English as a Foreign Language (TEFL).

EXTRA INFORMATION

Languages	Python, Matlab, R.
Packages	PyTorch, Keras, Pandas, SciPy, NumPy
Software	CellProfiler, ImageJ, MRICron