

**BIOINFORMATICS
STUDENT ASSOCIATION**

ALUMNI CAREER PANEL

SPRING
2021



Monday, March 22, 3:30 to 4:45pm



<https://udel.zoom.us/j/91240820848>

Password: BINF865



Dr. Madolyn MacDonald, '19



Dr. Allen Hubbard '18



Todd Yoder MS, '18



Dr. Mengxi Lv, '19



Dr. Felix Francis '18



Dr. M. Joseph Tomlinson '18



Dr. Saleh Tamim, '20

Dr. Felix Francis

Bioinformatics Data Scientist, Abcam



Dr. Felix Francis is a Senior Bioinformatics Data Scientist and team lead at Abcam, where he works on Antibody discovery and engineering, immune repertoire characterization and drug target identification. His projects leverages bioinformatics, systems biology and data science techniques to deploy advanced analytical and digital products. His group is involved in the Bioinformatics efforts in Abcam's Connecticut, California, Hanzou (China) and Cambridge (UK sites). He also currently mentors interns from Universities in the US and the UK working towards their industrial thesis projects focused on data science and systems biology.

Dr. Francis earned his PhD in Bioinformatics & Systems biology from University of Delaware, working on characterizing genetic diversity at quantitative resistance loci in maize. His research included the development of new software such as ThermoAlign and associated bioinformatic pipelines for resequencing studies. He was awarded the Interdisciplinary Research Prize for this PhD dissertation work at University of Delaware. Prior to that, he received his master of science degree from Louisiana State University and his bachelor's degree from Kerala Agricultural University.

Dr. M. Joseph Tomlinson

Scientific Investigator (Bioinformatics), GlaxoSmithKline



Dr. M. Joseph Tomlinson IV is a Scientific Investigator (Bioinformatics) at GlaxoSmithKline (GSK). At GSK he works on identifying new drug targets in the field of oncology and immuno-oncology by mining various types of multiomic datasets like TCGA and CCLE. Which consists of utilizing prior built software like Omicsoft's Array Studio or building custom based high-through put programs. Dr. Tomlinson's work largely focuses on identifying new synthetic lethal targets as they pertain to cancer research.

Dr. Tomlinson's background originally started off in molecular biology with wet lab experience, but during his graduate school (PhD- Molecular Genetics at Univ. of Virginia under Pat Concannon and Suna Onengut) he started to transition to computational biology, at which point he did a full career pivot to bioinformatics by returning to graduate school (MS-Bioinformatics at Univ. of Delaware under Behnam Abasht) with a large focus on bioinformatics/programming. His scientific background ranges from population genetics to utilizing high performance computing (HPC) to developing large-scale programming software.

It should be noted his master's Thesis work from the Univ. of Delaware was recently published in Scientific Reports titled "Investigation of Allele Specific Expression in Various Tissues of Broiler Chickens Using the Detection Tool VADT."

Dr. Madolyn MacDonald

Associate Bioinformatics Scientist, University of Delaware



Dr. MacDonald is an Associate Bioinformatics scientist at the University of Delaware Bioinformatics core. Her current focus has been on continuing her postdoctoral work, which involves analyzing next generation sequencing data to identify adventitious viruses during the manufacture of biotherapeutics and vaccines. She has also been part of website development projects, where she has designed and developed the underlying database structures.

Dr. MacDonald received her PhD in Bioinformatics & System Biology from the University of Delaware in 2019. She worked in Dr. Kelvin Lee's lab where she studied Chinese hamster genomics in order to improve Chinese hamster ovary (CHO) cell biotherapeutic production. This involved being part of a collaboration to assemble and annotate the Chinese hamster genome, and the development of a quality evaluation pipeline for genome assemblies based on machine-learning methods. She also had the opportunity to do a summer internship at GenPro LLC, a company that utilizes DNA methylation sequencing coupled with a bioinformatics analysis platform to identify differential methylation patterns among disease or treatment groups.

Prior to her PhD, Dr. MacDonald completed her BS degree in Bioinformatics from Rochester Institute of Technology.

Todd Yoder, MS

NGS Bioinformatics Specialist, University of Pennsylvania



Todd Yoder graduated from Millersville University with a B.Sc. in Biology. Upon graduating, he started at DuPont Pioneer working in soybean transgenics from 2009 to 2016. DuPont Pioneer sponsored his M.Sc. at the University of Delaware under the advisement of Dr. Randall Wisser where he genotyped and characterized a near isogenic maize population. While finishing his M.Sc. (2018), Todd joined the Division of Genomic Diagnostics at the Children's Hospital of Philadelphia in 2017—executing molecular genomic methods in a clinical laboratory. Most recently in 2019, he pivoted into clinical research as a bioinformatics specialist at the Center for Cellular Immunotherapies at the University of Pennsylvania and has since developed molecular and bioinformatics pipelines for a variety of platforms supporting CAR T cell research.

Dr. Mengxi Lv

Senior Data Scientist, IBM



I obtained my PhD degree from UD Bioinformatics program under the supervision of Dr. X. Lucas Lu and my MS degree in Bioinformatics in Dr. Cathy Wu's lab. During my PhD research, I worked as an intern for 10 months in Christiana Care Health System for analyzing electronic medical records to understand drug treatment effects on joint disease. Currently, I am working as a Senior Data Scientist in IBM Chief Analytics Office. My main responsibilities include communication with stakeholders to understand business problems, designing and delivering ML-driven solutions to solve business needs, and presenting data science insights to C-suite leadership and broader audiences.

Dr. Allen Hubbard

Postdoctoral Research Associate, Donald Danforth Plant Science Center



Currently, I work on new methods to quantify biochemistry and accelerate plant breeding with my main project being all aspects of a metabolomics drought stress GWAS in two plant species – Setaria and Sorghum – the former being an undomesticated grass which is an evolutionary outgroup to the C4 crops. I am working to find conserved drought stress biology in the C4 grasses, by focusing on metabolites that associate with syntenic regions in both species. This entire dataset is 7,200 untargeted metabolomics samples in total (1800 plants * 2 (HILIC + RPLC LC-MS)) *2 (Setaria and Sorghum). Skills which I picked up at UD that have proven extremely useful have included the ability to transition across disciplines (the life, computational and physical sciences), the ability to analyze data at scale, the ability to distill large, complex datasets into biological insight and many other skills.

Dr. Saleh Tamim

Postdoctoral Scientist, AbbVie



Dr. Tamim is a postdoctoral scientist in the Genomics Research Center at AbbVie where he is part of the Computational Genomics team. He is also a chair of the Communications and Branding Committee which aims to increase visibility of the postdoctoral program within and outside of the company.

Dr. Tamim's broad interests and expertise are in the computational biology field where he engages in the development of new methods and in the application of existing tools and approaches to answer biological questions. His experience in applying computational techniques such as comparative genomics and machine learning encompasses a diverse spectrum of biology domains. He has recently been actively involved in methods related to single cell technologies such as multimodal and spatial omics technologies.

Dr. Tamim received his PhD in Bioinformatics & System Biology from University of Delaware, MS degree in Computer Science from the University of Texas at San Antonio, and BS degree in Computer Engineering from Iowa State University. Prior to joining graduate school, Dr. Tamim worked as an Application Developer consultant for a few years in top companies including Target and Texas Instruments..