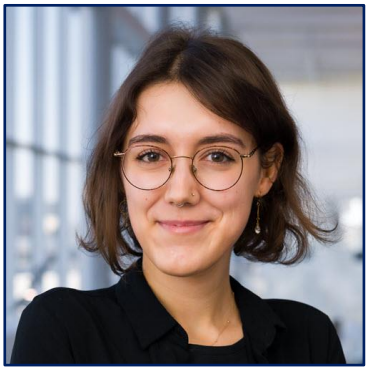
Careers in Computational Biology

Date: Friday, March 3rd, 2023
Time: 1 – 4 PM
Location: Lyda Hill Department of Bioinformatics
J9 Building, 5323 Harry Hines Blvd.,
Dallas TX 75390

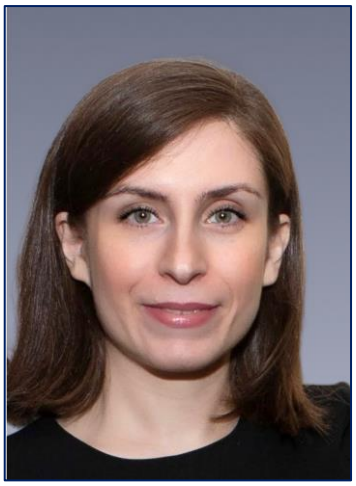
TIME	EVENT
1 – 2:45 PM	**Celebrating Women in Computational Biology** Women scientists from UTSW Department of Bioinformatics, UTSW BioHPC, Susan G. Komen and Lyda Hill IF/THEN share about their journeys in science and building their careers.
3:00 – 4 PM	**Career Huddles** Attendees meet with academic and industry mentors one-to-one or in small groups to discuss their own career plans, professional development goals, work-life balance and trailblazing paths in science.

UT Southwestern Medical Center
Lyda Hill Department of Bioinformatics

Aleksandra graduated with a B.S. in Biotechnology and M.S. in Bioinformatics from the Wroclaw University of Science and technology in Poland. Her overarching research goal is to bridge experimental observations and theoretical solutions. Her experience in computational design of small proteins earned her the BioLAB Scholarship from the Polish-American Fulbright Commission and enabled her to work abroad at UT Southwestern. She decided to continue her graduate education under mentorship of Dr. Satwik Rajaram. Her doctoral research focuses on developing novel deep learning algorithms to study morphology- and genetics-guided tumor evolution in kidney cancer.



Aleksandra Nielson, MS
Graduate Student, Biomedical Engineering
Researcher, Rajaram Lab
UT Southwestern
SPEAKER & CAREER MENTOR



Paniz Karbasi, PhD
Computational Research Scientist
BioHPC
UT Southwestern
SPEAKER & CAREER MENTOR

Paniz graduated with a Ph.D. in electrical and computer engineering from Baylor University in August 2018. Her Ph.D. research was mainly focused on proton computed tomography (pCT) and high-performance computing (HPC) leading to development of sparse robust iterative solvers and distributed multi-GPU based image reconstruction algorithms with the goal of generating real-time and accurate pCT images resulting in several publications. During the Ph.D. program, Paniz collaborated with several national and international proton CT research institutes including the Loma Linda University Medical School, which is the world's first hospital-based Proton Therapy Center. After graduating from Baylor University, Paniz joined the BioHPC team at UTSW to start her career as a computational scientist at the Bioinformatics department.

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Kimberly earned her PhD at UC Berkeley where her doctoral research focused on physics-based computational protein design to engineer protein-protein interfaces. She is fascinated that a linear polymer of a protein encodes the ability to fold, do chemistry, and sense the environment. She established her lab at UT Southwestern in 2014 and researches evolution-based design of protein allostery and activity. She has received a Gordon and Betty Moore Foundation's Data Driven Discovery Investigator award, the UTSW Excellence in Graduate Education Teaching award, a NSF CAREER award, and the Biophysical Society Biopolymers-in-Vivo Young Faculty award.

Kimberly Reynolds, PhD
Associate Professor, Systems Biology
Lyda Hill Department of Bioinformatics
Green Center for Systems Biology
UT Southwestern
SPEAKER & CAREER MENTOR

Katherine Hoadley, PhD
Assistant Professor, Cancer Genetics
UNC Chapel Hill
Susan G. Komen Researcher
SPEAKER & CAREER MENTOR

Katherine earned her PhD in Genetics and Molecular Biology from UNC Chapel Hill. Her research interests include integrative genomic analyses to better understand cancer. She has received several awards including but not limited to BCRF Marion R. Wright Award for Scientific Excellence, Top 1% Highly Cited Researchers from Web of Science Clarivate Analytics, and Susan G. Komen North Carolina Triangle to the Coast Spirit to Impact Award (for supporting survivors and being a catalyst for change in breast cancer outcomes). She is also a participating faculty member in the Bioinformatics and Computational Biology (BCB) and Genetics and Molecular Biology (GMB) graduate programs at UNC Chapel Hill.

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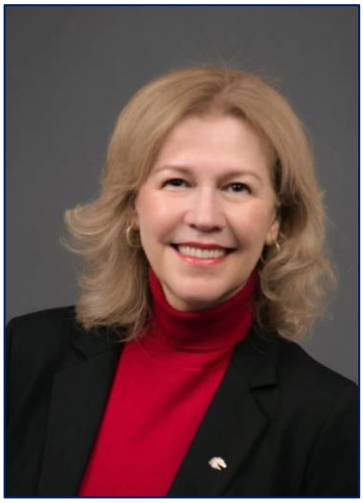
Mathematician and IF/THEN Ambassador, Minerva Cordero, is a Professor of Mathematics and Vice Provost for Faculty Affairs at the University of Texas at Arlington. During 2018-2019, she was a Program Director at the National Science Foundation (NSF), working with the Organizational Change for Gender Equity in STEM Academic Professions (ADVANCE) and the Hispanic Serving Institutions (HSI) programs. Currently, she serves as an "expert" for the NSF Historically Black Colleges and Universities Undergraduate Program. She is a renowned researcher in Finite Geometries. Her research has been funded by the National Science Foundation and the National Security Agency, among others. Her teaching career spans over 25 years. She holds three degrees in mathematics: a doctorate (Ph.D.) from the University of Iowa, a Master of Arts from the University of California-Berkeley, and a Bachelor of Science degree from the University of Puerto Rico, her native land.



Minerva Cordera, PhD
Professor, Mathematics
UT Arlington
Lyda Hill Philanthropies IF/THEN Ambassador
SPEAKER & CAREER MENTOR

Tyler C. Allen
Storage Sales Specialist
IBM
CAREER MENTOR

Tyler has experience with Data Storage, Data Center solutions, high-performance computing infrastructure, and networking. He has traveled to help clients across the nation. He has worked at McKesson, IntelliVoice, Hewlett-Packard, and is now at IBM specializing in field systems storage solutions. His current clientele spans the state of Texas including government entities, hospitals, and school districts. Tyler earned his BBA in Marketing with a focus on Professional Selling.

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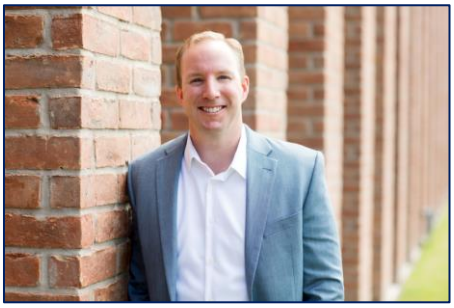
Chris Bogan joined Mark III Systems in 2014 after 10 years in industry leadership and business development roles. Chris is currently responsible for overall customer satisfaction and a wider range client-focused initiatives across North America, as well as alliances with key technology partners. His areas of expertise include IT strategy and implementation, scalable HPC, augmented AI, Big data and API-based solutions, and data protection, backup, and archival. Chris earned his BS in Business with a focus on Information Systems.



Chris Bogan
Vice President - Sales
Mark III Systems
CAREER MENTOR

Deirdre Brekken, PhD
Associate Dean,
Postdoctoral Affairs
UT Southwestern
CAREER MENTOR

Deirdre earned her doctorate from UT Southwestern and completed her postdoctoral training at the Seattle Biomedical Research Institute. She returned to UT Southwestern as a faculty member and Lead Scientist in the Alliance for Cell Signaling to study phosphoproteins and their phosphorylation sites using proteomic techniques. Dr. Brekken stepped away from the bench and is the Associate Dean for Postdoctoral Affairs. She directs the Postdoctoral Certificate Training Program and oversees the appointments and career development of the nearly 600 postdocs currently training at UT Southwestern.

Allissa earned her doctorate in Computational Neuroscience from the Karolinska Institutet in Sweden. She worked at the NCI for her postdoctoral training and then built a professional career in Data Science Strategy. She then worked at NIH as Engagement and Outreach Lead and led many NIH codeathons as well as the Data Science for Science Teachers Boot Camp. She currently works as an adjunct instructor in Workforce Development and Continuing Education at Montgomery College.

Allissa Dillman, PhD
Data Science Consultant,
Community Manager
CAREER MENTOR

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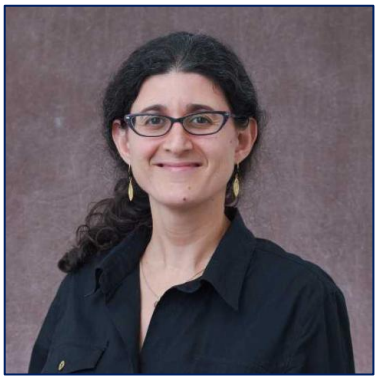
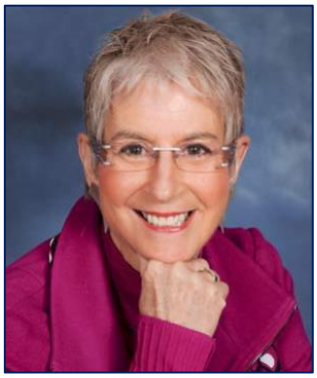
Khuloud earned her doctorate in Biophysics from Indiana University. She completed her postdoctoral training at in cell biology at the Scripps Research Institute. Her research focuses on spatiotemporal organization of signaling proteins in plasma membrane, mechanics, and signaling crosstalk. She is skilled at high- and super-resolution microscopy, computer vision, and stochastic mathematical modeling. She is a CPRIT Scholar and a Deborah and W. A. Tex Moncrief Jr. Endowed Scholar in Medical Research. She is passionate about graduate education and is a part of the Computational Biology and Molecular Biophysics graduate programs that are a part of Biomedical Engineering at UT Southwestern.



Khuloud Jaqaman, PhD
Associate professor, Biophysics
UT Southwestern
CAREER MENTOR

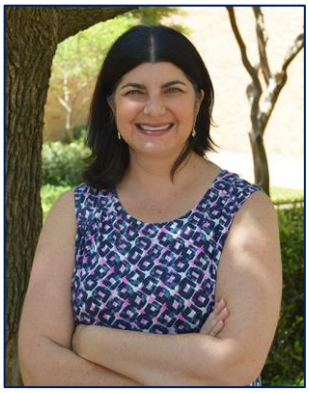


Cheryl Jernigan, CPA, F.A.C.H.E.
Advocate In Science
Susan G. Komen
CAREER MENTOR

Cheryl is a 25-year breast cancer “thriver” and cancer research advocate. She strives to inform and empower patients to be effective partners, working with researchers and clinicians to enhance and focus research on what matters to patients. An active research advocate, Ms. Jernigan is a member of the National Cancer Institute’s (NCI) Central Institutional Review Board for Adult Late Phase Clinical Trials; Rutgers Cancer Institute of New Jersey External Advisory Board; the Clinical Trials Transformation Initiative's Steering Committee; and the Multi-Regional Clinical Trials Center’s Working Groups on Returning Clinical Trial Results to Participants and Returning Individual Results. She serves as an Advocate Member on the Cancer Prevention & Epidemiology Committee and as a member on the Patient Advocate Committee of SWOG for Cancer Research, which is a part of the NCI’s National Clinical Trials network.

Jerome joined Susan G. Komen® in January of 2011 as a member of the team managing the money provided to breast cancer researchers around the world. In 2015, he started managing the Komen Scholars. Since 2019, he became Senior Manager, Data Science, a position in which he oversees Komen's Big Data for Breast Cancer (BD4BC) Initiative that aims at using big data to fuel scientific discoveries and accelerate the delivery of equitable, patient-focused care. Committed to the Nashville community where he is based, Dr. Jourquin sits on Komen Central Tennessee's More Than Pink Walk® Planning Committee and is the treasurer of the Alliance Française of Nashville. With a particular interest in data mining and data sharing, Dr. Jourquin was also part of a multidisciplinary team of experimentalists, mathematicians, engineers, and bioinformaticists studying breast cancer invasion at Vanderbilt. Dr. Jourquin, a French native, earned a Ph.D. in Neurosciences from the University of Aix-Marseilles (2003) and a Master in Cell Biology and Animal Physiology from the University of Paris 7 –Denis Diderot (1997).

Jerome Jourquin, PhD
Senior Director, Data Science
Susan G. Komen
CAREER MENTOR



Laura D Mydlarz, PhD
Professor, Biology
UT Arlington
CAREER MENTOR

Laura obtained her doctorate in marine natural products from UC Santa Barbara. She completed a postdoctoral appointment in coral diseases and coral immune responses. She established her own lab at UT Arlington where her research now focuses on pathways that confer disease resistance in corals and what life-history trade-offs have caused variation in investment in immunity. Her research is well funded by several awards from NSF to investigate the spread and immune responses of several coral species to White Plague and Scleractinian Coral Tissue Loss Disease in the Virgin Islands. Dr. Mydlarz has also won numerous awards for her teaching and leadership of student support programs.

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Holly Newman is an experienced Sales Professional and Information Technology Leader with a 20-year tenure of working in the information technology and services industry using a customer-first approach. Her technical background is largely based in Healthcare IT where she led teams through EHR implementations, Clinical Trials Management and IRB system implementations, Analytics/HPC, and Academic Medical Research Technology strategy. In her current role at DDN, she focuses on business development utilizing her unparalleled commitment to customer service and background in solution implementations. She engages with Academic Medical Centers and Healthcare Institutions in the Midwest to optimize or develop HPC and AI/ML strategies. Holly is a graduate of Texas A&M University (B.B.A. in Management Information Systems) and is a Certified Project Manager (PMP). Outside of work, she enjoys exploring the Texas Hill Country with her husband and four children, being on the lake or at the beach, and watching their children participate in sports and activities

Holly Newman
Sales Professional, Information Technology Leader
Data Drive Networks
CAREER MENTOR

Aron Parekh, PhD
Scientific Programs Manager, Susan G. Komen
CAREER MENTOR

Aron earned his doctorate in Chemical Engineering from Penn State and was an Assistant professor at Vanderbilt University before he started with Susan G. Komen. His research was focused on mechanobiology research in cancer and wound healing to understand how mechanical forces drive pathologic cellular phenotypes in cancer and wound healing by utilizing biochemical and biomechanical approaches that include *in vitro*, *ex vivo*, *in vivo*, and *in silico* techniques and/or models. He uses his expertise in academic research, interdisciplinary project management, mentoring, and scientific communication in his current role to build research programs, lead diverse personnel, and establish working relationships to explore and navigate various scientific and clinical disciplines.

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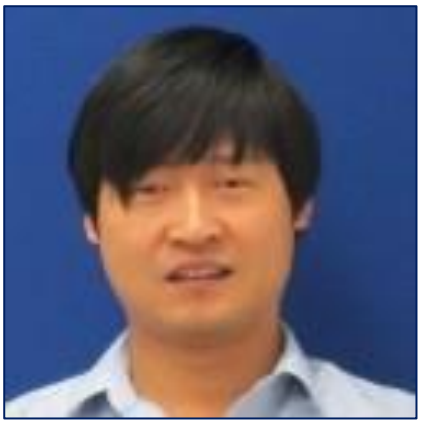
Kent is a senior management executive and sales leader. His responsibilities include direction of all sales, engineering, support and demand generation activities for the Central US Region. Mr. Snider has over 15 years in the high technology industry in various sales, sales management and consulting roles. Mr. Snider has broad experience in the IT industry including networking, HPC, storage infrastructure, managed services and IT contract consulting. His assignments have covered many vertical markets (Oil & Gas, Media, Entertainment, Engineering, Manufacturing and Health Services), working for NetApp, Gartner Consulting and EMC. He hold a BS degree in Business from Ball State University and is a graduate of the University of Pennsylvania Wharton School of Executive Education.

D. Kent Snider
Director, Southwestern US
Nvidia - Healthcare Vertical Markets
CAREER MENTOR



Liqiang Wang
Director, BioHPC
UT Southwestern
CAREER MENTOR

Liqiang received his master's degree in computer science from University of New Orleans. For the past 9 years, Liqiang has been working in High Performance Computing (HPC) from IBM SP, P5 and P5+ supercomputing systems to large-scale beowulf clusters and providing scientific computing consultation to researchers in science and engineering. He has received certifications from 15 industrial companies. While working for the Louisiana Optical Network Initiative (LONI), a state-wide supercomputing infrastructure for academic research, he provided scientific computing and applications support, supercomputing system deployment and administration of over 300 TFlops total computing capacity. He participated in multiple LONI projects, including Cybertools and HPCOPS. Wang developed an MPI-MapReduce cloud platform for the digital forensics research funded by the FBI in New Orleans. He leads the development of proposals to expand or extend the HPC system based on needs articulated by BioHPC member entities.

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Danny received his Ph.D. from the University of Texas-Houston in tumor biology. Following his doctoral research, he became a research scientist at the Upjohn Company and Glaxo pharmaceuticals. At both companies, he was responsible for pre-clinical testing of anti-cancer drugs. He joined the faculty of the Pennsylvania State University College of Medicine where he ascended the faculty ranks to the level of Associate Professor. Dr. Welch then joined the faculty of the University of Alabama at Birmingham as a Professor of Pathology and Director of the Metastasis Program at the Comprehensive Cancer Center. His research will develop critical foundational information needed to understand how mitochondrial DNA and its tRNA fragments impact cancer metastasis. This needed information can identify new biomarkers of metastasis and/or therapeutics. Moreover, the information will be readily available with user-friendly platforms to accelerate the discovery and characterization of tRNA fragments by other labs worldwide.

Danny R. Welch, PhD
Professor, Cancer Biology
University of Kansas
Cancer Center
CAREER MENTOR

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