

Mark Ramsey, Ph.D.

Dr. Ramsey holds a bachelor degree in Computer Science, an MBA with specialization in Computer & Information Security, and a Ph.D. specializing in Applied Computer Science. Mark is the R&D Chief Data & Analytics Officer for GSK. He leads the Data & Computational Sciences team responsible for the transformation of R&D through the application of artificial intelligence, machine learning and analytics on internal and external data to drive data-driven decision making. Mark led the development of the R&D Information Platform which serves as the foundation of the data strategy. Integrating an ecosystem of nearly two dozen technologies, RDIP provides a production, large scale environment to support data consolidation, rationalization, and analytics on complex data ranging from genetics to bioassays. Mark has been recognized as one of the Top 100 Innovators in data & analytics.

Title: Using Bots, Machine Learning & Pipelines to create a modern data management environment

Abstract TBA



Karin Strauss, PhD

Karin Strauss is a Senior Researcher at Microsoft and an Affiliate Professor in the Allen School for Computer Science and Engineering at University of Washington. Her research lies at the intersection of computer architecture, systems, and biology. Lately, her focus has been on DNA data storage. In the past, she has studied other emerging memory technologies and hardware accelerators for machine learning, among others. Previously, she worked for AMD, and before that she got her Ph.D. in 2007 from the Department of Computer Science at University of Illinois, Urbana-Champaign.

Title: DNA Data Storage and Near-Molecule Processing for the Yottabyte Era

Abstract:

DNA data storage is an attractive option for digital data storage because of its extreme density, durability and eternal relevance. This is especially attractive when contrasted with the exponential growth in world-wide digital data production. In this talk we will present our efforts in building an end-to-end system, from the computational component of encoding and decoding to the molecular biology component of random access, sequencing and fluidics automation. We will also discuss some early efforts in building a hybrid electronic/molecular computer system that can offer more than just data storage, for example, image similarity search.