



**David T. Burke, PhD**



**"Deep Monitoring" Chronic Disease  
in Underserved and Remote  
Populations**

**Monday October 30, 2017  
4:40PM in 1123 LBME**

Each day, one-fourth of the US adult population struggles with chronic illness – diabetes, glaucoma, hypertension. Chronic diseases disable individuals, burden families, and impoverish our communities. With the proper tools, however, many chronic diseases can be controlled. Millions of adults need to know, frequently and precisely, about their own health. Unfortunately, because of cost or location, many people do not have easy access to a physician or trained caregiver. The demand for high-quality, inexpensive health management remains unfulfilled. Our Team builds systems to monitor and control chronic diseases in underserved communities. We develop and produce low-cost, physician-tested technologies for personal health assessment. With community partners, we design and build convenient, transportable health-stations that meet local needs. Our solutions harness the existing manufacturing, communication, and transportation infrastructure. As a result, our systems are easily replicated in large numbers and can reach underserved communities rapidly.

**David Burke, Ph.D.** is currently Professor and Interim Chair in the Department of Human Genetics. He completed his BS in Biological Sciences from the University of Rochester in 1982, a PhD in Genetics from Washington University in St. Louis in 1988, and post-doctoral fellowship at Princeton University in 1991. He has been on the faculty of the University of Michigan, Department of Human Genetics since 1991. His research interests include: (1) quantitative trait analysis of complex, multigenic traits in synthetic populations of the laboratory mouse, (2) the development of engineering systems for microsensors and microfluidic analysis, and (3) low-cost technology systems for health care monitoring in underserved populations.

The seminar series "Providing Better Healthcare through Systems Engineering" is presented by the U-M Center for Healthcare Engineering and Patient Safety (CHEPS): Our mission is to improve the safety and quality of healthcare delivery through a multi-disciplinary, systems-engineering approach.

For additional information and to be added to the weekly e-mail for the series, please contact [genekim@umich.edu](mailto:genekim@umich.edu)