

Precision Convergence Webinar Series

Convergence at scale among health care, data, and open science: Can secure, liquid, data drive precise decision-making and practice?

By Dr. Jonathan Silverstein

With High-Level Panel of Leaders in Science, Technology, On-the-Ground Action, and Policy

Wednesday, October 27, 2021 | 11 AM to 1 PM EST (2 hours in duration)

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ABSTRACT: In the biomedical domain, individuals of all types (clinicians, payers, patients, scientists, innovators) must make precise decisions based upon data. Yet the data relevant to their decisions spans vast domains inaccessible in usable form to each. In this talk we explore the collection, assembly, and re-use of data fit to purpose. Considerations include policy and technology that can lead to collaborative socio-technical systems. What is permitted? How do U.S. Federal regulations such as HIPAA impact the assembly of data for open scientific use. What impact does the privacy and confidentiality of -omics data have? How do we manage authentication and authorization of individual actors in flexible ways? Can data be normalized and does it have to be? Can we achieve the secure data liquidity we need to build converged collaboration focusing on the individual. What role do learning health systems play?



PRESENTER: Jonathan Silverstein, MD, MS, FACS, FACMI, is internationally known for his expertise in the application of advanced computing architectures to biomedicine. He serves as Chief Research Informatics Officer and Professor of Biomedical Informatics at University of Pittsburgh School of Medicine. Previous positions include Chief Medical Informatics Officer at Tempus, Vice President and Davis Family Chair of Informatics at NorthShore University HealthSystem, and associate director of the Computation Institute at the University of Chicago and Argonne National Laboratory. Recognized as a founding scientific director of the Chicago Biomedical Consortium, and most recently as a Principal Investigator for the Human BioMolecular Atlas Program (HuBMAP) Infrastructure, he was an attending general surgeon while serving as lead physician informatician for multiple enterprise electronic health record deployments. Dr. Silverstein earned his medical degree from Washington University in St. Louis and his Master of Science from the Harvard School of Public Health. He is a Fellow of the American College of Surgeons and of the American College of Medical Informatics.

About the series: The [precision convergence series](#) is launched to catalyze unique synergy between, on the one hand, novel partnerships across sciences, sectors and jurisdictions around targeted domains of real-world solutions, and on the other hand, a next generation convergence of AI with advanced research computing and other data and digital architectures such as [PSC's Bridges-2](#), and supporting data sharing frameworks such as [HuBMAP](#), informing in a real time as possible the design, deployment and monitoring of solutions for adaptive real-world behavior and context.

The McGill Centre for the Convergence of Health and Economics (MCCHE) is a virtual world network of scientist, action and policy leaders promoting the weaving of digital-powered interdisciplinary science into person-centered domain-specific solutions at scale to global challenges faced by traditional and modern economy and society worldwide. The MCCHE stimulates lasting collaborations that bridge the many divides in the market, economy, and society that are at the root of these most pressing modern challenges through collaborative of modular convergence innovation platforms.

The Pittsburgh Supercomputing Center is a joint computational research center between Carnegie Mellon University and the University of Pittsburgh. Established in 1986, PSC is supported by several federal agencies, the Commonwealth of Pennsylvania and private industry. PSC provides university, government, and industrial researchers with access to several of the most powerful systems for high-performance computing, communications, and data-handling available to scientists and engineers nationwide for unclassified research. PSC advances the state-of-the-art in high-performance computing, communications and informatics and offers a flexible environment for solving the largest and most challenging problems in computational science.