

SOS27: Abstract for session “Sensitive Data in HPC: Technology and Processes for Medical Platforms”

The increasing reliance on High-Performance Computing (HPC) in medical research and clinical practice has led to significant concerns about data security. Sensitive information, such as patient health records, genetic data, and pharmaceutical development data, must be protected from unauthorized access, theft, and breaches. This session will explore the latest technologies and processes for safeguarding sensitive data in HPC environments, specifically tailored for medical platforms.

We will delve into the challenges of implementing robust data protection measures in HPC, including data encryption, access control, and integrity checks. Additionally, we will examine best practices for managing and storing sensitive data, including data anonymization, de-identification, and pseudonymization. The session will also highlight recent advances in secure HPC architectures, such as secure multi-tenancy, isolation, and separation, designed to support the unique needs of medical research and healthcare.

By bringing together experts in HPC, cybersecurity, and medical informatics, this session aims to provide a comprehensive overview of the current state-of-the-art in protecting sensitive data in HPC medical platforms, identifying key challenges, and outlining future directions.