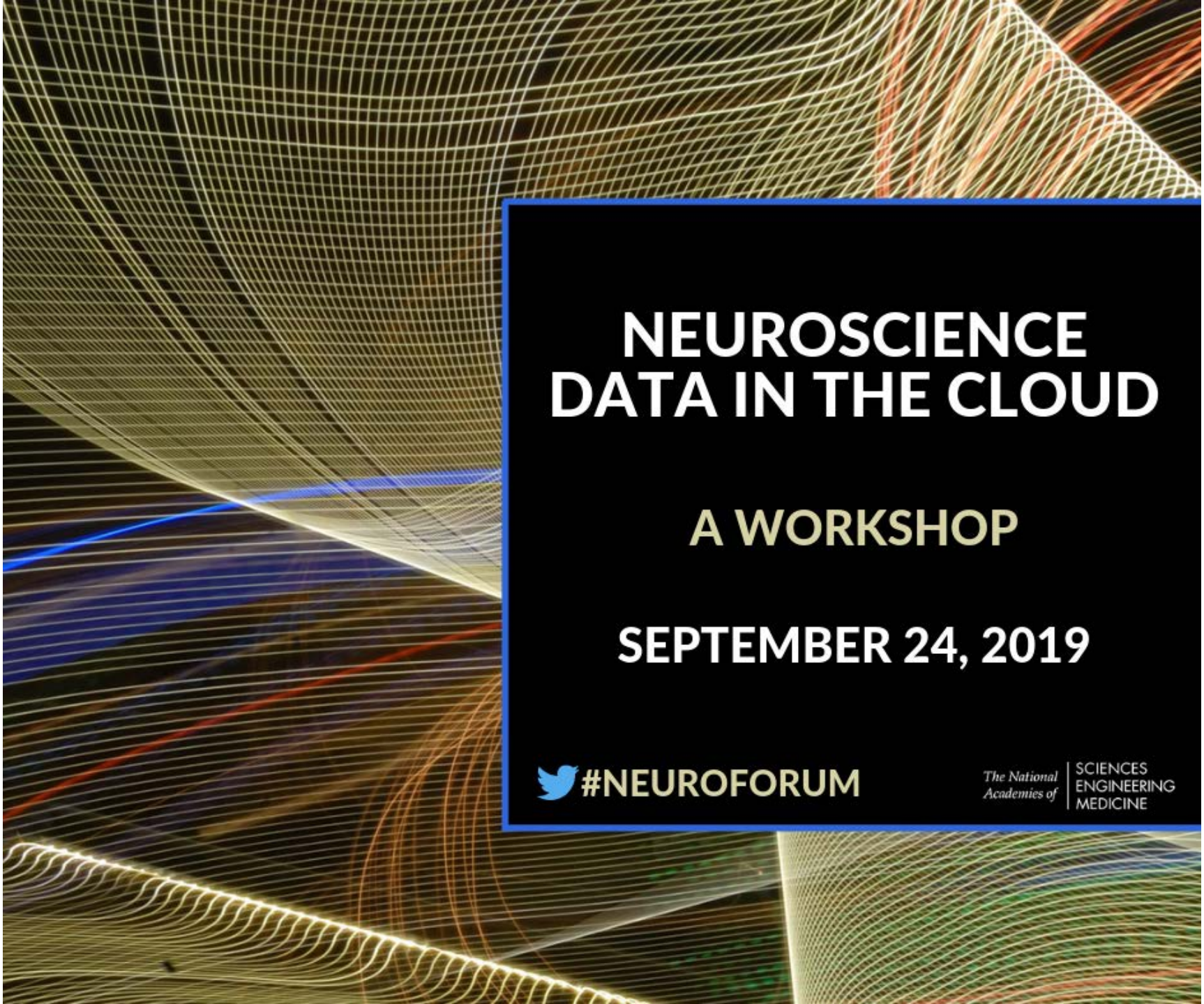
NEUROSCIENCE
DATA IN THE CLOUD
A WORKSHOP
SEPTEMBER 24, 2019
#NEUROFORUM
The National Academies of
SCIENCES
ENGINEERING
MEDICINE

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Definition of “cloud-based”

- *“Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. The term is generally used to describe data storage and/or processing centers available to many users over the Internet”* adapted from Wikipedia
- Essential Characteristics from NIST report:
  - On-demand self-service
  - Broad network access
  - Resource pooling
  - Rapid elasticity
  - Measured Service
  - Can be private, community based, public or a hybrid of above

Workshop Objectives

- Review the landscape of major neuroscience cloud-based initiatives and other uses of cloud technology within neuroscience research.
- Discuss aspirational goals for **maximizing benefit from neuroscience data** and compute in the cloud by empowering broad and meaningful data sharing and fostering open science.
- Consider **best practices and policies** that would increase efficiencies and data protection within and across cloud neuroscience resources, including around aspects such as: authorization by data sources for and accessibility to a variety of data types by a variety of users; protection of privacy; assignment of credit, ownership, and licensing; technical issues; and researcher support and training.
- Explore potential next steps to move the field forward and develop and deploy best practices and policies in the service of achieving the aspirational goals.

Agenda Overview

September 24, 2019

Session I: The Use of Cloud-Based Technology for Neuroscience Research – An Overview of Successes and Current Barriers

Session II: Breakout Discussions

Morning Session

- Protection of Privacy
- Assignment of Credit, Ownership, and Licensing
- Data Management
- Platform Governance, Funding, and Sustainability

Afternoon Session

- Clinical Trial and Research Data
- Genetic Data
- Neuroimaging
- Real-World Data

Session III: Future Directions