# *Biomedical Informatics Grand Rounds*

**Wednesday, Sep 22, 2021 3:00 pm – 4:00 pm**

# How COVID-19 advances FAIRness of epidemiological data spaces

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**Bio:** Dr. Jonas S Almeida is currently a Senior Investigator and Chief Data Scientist at the Division of Cancer Epidemiology and Genetics (NIH/NCI/DCEG). The primary focus of his research is to accelerate the investigation of epidemiologic and genetic causes of cancer by developing innovative digital methods that advance the computational research infrastructure for precision prevention. Dr. Almeida seeks to identify and deliver consumer-facing architectures for precision medicine and prevention that employ cloud computing, web applications, and machine learning.

Dr. Almeida received his Ph.D. in Biological Engineering from the University Nova of Lisbon, Portugal, in 1995. After a postdoctoral fellowship in computational statistics and machine learning at the University of Tennessee and Oak Ridge National Laboratory, he became an Assistant Professor in Chemistry at the University of Lisbon in 1996, followed by an appointment as an Associate Professor of Biostatistics at the Medical University of South Carolina in 2001 and as a tenured Professor of Bioinformatics in the Division of Applied Mathematics of the University of Texas MD Anderson Cancer Center in 2006. In 2008, MD Anderson awarded Dr. Almeida the endowed Abell-Hanger Distinguished Professorship in Bioinformatics. In 2011, he was recruited to be the inaugural Director of a new Division of Informatics and tenured Professor in the Department of Pathology of the University of Alabama at Birmingham. In 2015, he joined Stony Brook University as a tenured Professor and Chief Technology Officer. Dr. Almeida was appointed Chief Data Scientist of DCEG in 2019.

**Abstract:** The availability of persistent epidemiological data in real-time has for long been the missing feature needed for Data Science constructs, including AI, to be embedded in biomedical applications. This has changed dramatically during the COVID-19 pandemic to the extent that it is now an expected attribute of data commons. The consumer-facing nature of these spaces is also having a significant effect on the media used to communicate scientific results. This presentation will illustrate this discussion with a walk-through of live analytical tools, from NY's dept health to NIH and CDC, probing data spaces striving to be findable, accessible, interoperable, and reusable (FAIR) research commons.

**Educational Objects**: Upon completion, participants should be able to:

- What are Data Commons https://commonfund.nih.gov/commons?
- How are COVID-19 data resources testing the reusability of reference biomedical BigData?
- What are FAIR principles for the stewardship of scientific data paving the road to consumer-facing AI analytics?
- Discussion: Data Science as a form of scientific literacy - the reality and the fiction.

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