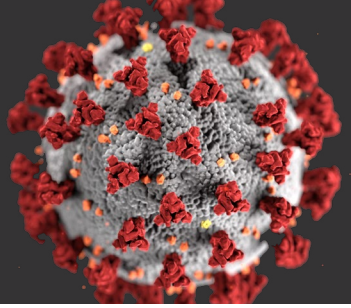
COVID Research and Resources Group

Webinar Series



What we know and don't know about SARS-CoV-2: origins and evolution

Wednesday, October 7, 12:00 pm ET

Register at go.aps.org/covidwebinar2

For more information visit go.aps.org/crrgwebinars

Topics covered during this webinar:

- Dr. Rabadan's recent book "Understanding Coronavirus"
- Basic biology and evolution of viruses infecting humans such as coronaviruses or influenza.
- Virus genomes, their hosts, how they infect cells and how they replicate and under what circumstances they can cause pandemics.
- Detailed discussion of the virus SARS-COV-2 that causes the disease Covid-19, and its relationship to other previous SARS viruses
- Studying this virus using quantitative methods.

Speaker: Raul Rabadan, Columbia University

Moderator: Hossein Khiabanian, Rutgers University

Professor Raul Rabadan is Spanish-American theoretical physicist and computational biologist. After getting his PhD in Theoretical Physics, he did post-doctoral work at CERN in Geneva, Switzerland and the Institute for Advanced Study in Princeton, before joining Columbia University as a faculty member. At Columbia University, Dr. Rabadan directs the Program for Mathematical Genomics and the Center for Topology of Cancer Evolution and Heterogeneity. He applies quantitative approaches to model and understand the dynamics of biological systems through the lens of genomics. His research focuses on the evolution of two biological systems, namely cancer and infectious diseases. In cancer research, he works on identifying driver mechanisms of evolutionary processes in tumors. In the area of infectious diseases, he tries to understand the evolution of pathogens by analysis of their genomes, in particular the genomes of RNA viruses such as influenza and coronaviruses. His recent book, "Understanding Coronavirus" provides a concise and accessible introduction to the coronavirus SARS-COV-2 which has caused the ongoing global pandemic. He is also the author of a textbook about the use of topological methods in genomic analysis ("Topological Data Analysis for Genomics and Evolution: Topology in Biology").

About the CRRG

The COVID Research and Resources Group (CRRG) aims to connect physicists and other scientists through COVID-related research and education efforts. If you would like to join CRRG, visit our website, find our community on engage.aps.org, or email crrg@aps.org and we will connect with you.