

SMS Spring 2022 O’Keeffe Lecture

Friday April 8 | 2:30pm | Biodesign Auditorium*

The Exquisite Choreography of Translation Initiation

Translation is the last step of gene expression and a point of extensive regulation. How an mRNA is chosen to be translated, how a translation start site is found at the 5’ end of an mRNA and how translation gets started at the correct site all remain a mystery, veiled by the dynamic nature of the process and myriad factors that guide it. We have developed and applied single-molecule approaches merged with structural methods to observe and animate this process in higher organisms. Our goal is a direct real-time movie of molecular processes underlying how proteins are made.

Joseph D. Puglisi

***Jauch Professor, and Professor of Structural Biology
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Joseph (Jody) Puglisi is Jauch Professor and CZI Biohub Investigator in the Department of Structural Biology at Stanford University School of Medicine. His work focuses on the biophysical and structural analysis of RNAs and RNA-protein interactions and his group use broad biophysical and biochemical methods to understand the interplay of structure and dynamics in a variety of systems, in particular translation. Born and raised in scenic New Jersey, he received a B.A. degree in Chemistry in 1984 from The Johns Hopkins University and a Ph.D. in Biophysical Chemistry from UC Berkeley in 1989 working with Ignacio Tinoco, Jr. After postdoctoral research in Strasbourg and MIT, he joined the faculty at UC Santa Cruz in Chemistry and Biochemistry in 1993. He moved to Stanford University in 1997, where he was Chair of the Department of Structural Biology from 2004 to 2014. He is a member of the US National Academy of Sciences.

