ICTS | INTERNATIONAL CENTRE for THEORETICAL SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS SPECIAL (ONLINE) COLLOQUIUM

William Bialek

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William Bialek is the John Archibald Wheeler / Battelle Professor in Physics, and a member of the Lewis-Singler Institute for Integrative Genomics, at Princeton University. A theoretical physicist broadly interested in the phenomena of life, Bialek is best known for contributions to our understanding of coding and computation in the brain. Bialek has made significant contributions to understanding optimal strategies in brain function, the early events of embryonic development and the collective states of biological systems - the activity in a network of neurons, or the flight directions in a flock of birds - using ideas from statistical physics. His work has been recognized by election to the US National Academy of Sciences, by the Swartz Prize for Theoretical and Computational Neuroscience, and by the Max Delbrück Prize for Biological Physics, among other honors. As passionate about teaching as about research, he has received the President's Award for Distinguished Teaching at Princeton, and is the author of a textbook, Biophysics: Searching for Principles (2012).

Physics of Life

A survey from the US National Academy of Sciences

Once every ten years, the US National Academies of Science, Engineering, and Medicine survey the state of physics research. To make the task manageable, it is broken into separate volumes on astrophysics, condensed matter physics, etc.. In this cycle, for the first time, biological physics stands alongside these more traditional divisions of our subject. This marks the emergence of biological physics as a genuine branch of physics, not the application of physics to biology or an interdisciplinary amalgam. In this talk I will try to convey what we learned about the exciting state of the field today, the historical context out of which the field has emerged, and the challenges we face going forward.

6:00 PM (IST), 29th July, 2022

Zoom link: https://biturl.top/MVFjqu
Meeting ID: 836 1528 0113
Passcode: 292922