

The Statistical Physics of Popularity

Wednesday, July 8th 7:30 pm, Room G1B20

Duane Physics Building at University of Colorado

For more information call (303) 492 – 5436 or 3367

One way physicists determine who's hot and who's not is by scientific citations. When we publish, we cite previous work and use past work to make new discoveries. Thus all academics are rated by citations. I will start with popularity culture, as embodied by the covers of People magazine, and describe ways to quantify popularity. In this spirit, I will analyze citations from the premier physics journal, the Physical Review. The growth of citations is described by "the rich get richer" --- being well cited now makes it likelier to be well cited in the future. The time history of citations is intriguing, with examples of "one-hit wonders", "sleeping beauties", and "hot" publications. Finally, I will present a Google PageRank analysis that reveals "hidden gems" among scientific publications.



Professor Sid Redner

Sid Redner is a statistical physicist and a Professor of Physics at Boston University. He applies statistical methods to understand complex phenomena in Nature, including the kinetics of chemical reactions, transport in disordered materials, the structure of complex networks, the dynamics of social systems (yes, physicists work on this topic!), and even the vicissitudes of popularity.