Truth and Reality: How to Be a Scientific Realist Without Believing Scientific Theories Are True

Scientific realism is a thesis about the success of science. Most traditionally: science has been so successful at prediction and guiding action because its best theories are true (or approximately true or increasing in their degree of truth). Views that are popular in contemporary philosophy of science about scientific modeling and the centrality of idealization create several challenges for this traditional form of scientific realism. Yet the basic idea behind scientific realism that science has been and will continue to be epistemically successful is deeply appealing. This talk explores the challenges posed by idealization and scientific modeling to motivate a scientific realism fully divorced from the idea that science is in the business of generating true theories. On the resulting view, the objects of scientific knowledge are causal patterns, so this knowledge only ever provides partial, simplified accounts of a complex reality. This variety of selective realism better accommodates the nature of our present-day scientific successes and offers an interpretation of scientific progress that resists the antirealist's pessimism.