Abstract: Knee osteoarthritis is a heterogeneous joint disease that affects a quarter of a billion people world wide. The disease has no cure. We have no drugs that can halt or even slow disease progression. Clinicians can only manage symptoms, and our most effective treatment, joint replacement, is reserved for when the joint fails. While joint replacement is by many metrics an extremely successful surgery, there are still 20% of patients who are not satisfied with the results. We often don’t really know why. This leaves us with a large problem space and also a tremendous range of opportunities for impactful discoveries for this disease. This talk will cover a broad range of challenges in advancing our understanding of knee osteoarthritis and joint replacement as seen from the perspective of a surgeon researcher.

Biography: Peter Schilling is an Assistant Professor of Orthopaedic Surgery and Adult Joint Reconstruction at Dartmouth Hitchcock Medical Center and the Geisel School of Medicine at Dartmouth. He’s spent his career in three domains: Academic research, clinical orthopaedics, and the digital health technology sector. Peter has built, led, and consulted for a wide variety of digital health companies throughout Silicon Valley — most recently as the product lead for a digital assistant for doctors (think “Siri” or “Alexa” for doctors). Peter returned to clinical medicine and academic research in joint arthroplasty at Dartmouth in 2020. His research is devoted to translating advances in clinical orthopaedics by 1.) Seeking AI / machine learning solutions through from theory to the clinicians’ hands, and 2.) Making data-driven, algorithmically-aided scientific discoveries.

Peter holds a Bachelor of Arts degree from Dartmouth College, an MD from Stanford University, and an MSc in quantitative methods in health care from the University of Michigan. He completed his residency training at the University of Michigan and his fellowship training in adult reconstruction at the University of California San Francisco (UCSF).