For many years, regulators, politicians, and innovators have continuously hoped for dramatic improvements in spectrum access to allow a dramatic increase in spectrum availability for mobile broadband, public safety, and a myriad of other bandwidth-consuming devices. So far, no such dramatic transition has occurred, and most “new” spectrum is the mundane result of complicated and expensive reallocations, repurposing, and relocations. The most promising new spectrum access paradigm—dynamic spectrum access—has failed to materialize on a grand scale, mostly because of a general “not-in-my-backyard” fear among spectrum incumbents.

Recently, several new developments have given renewed urgency to discovering better and more efficient ways to use the radio spectrum. While these initiatives generally focus on relatively near-term solutions, many of them call for increased investment in wireless research to help alleviate the growing demand for spectrum bandwidth. Partly in response to this call, NSF established the Enhancing Access to the Radio Spectrum (EARS) program, whose single purpose is to fund research that can improve the efficiency with which radio spectrum is used and/or improve access to the radio spectrum by traditionally underserved populations, such as rural communities.

The purpose of this presentation is to examine some of the most recent initiatives and how they are shaping (but not constraining!) promising research avenues in the wireless domain. It will also summarize what we are learning about wireless research and its intersection with current economics and public policy issues. On a related and more practical note, opportunities for funding under the EARS program will also be discussed.