Abstract:

Iwasawa theory concerns the growth of arithmetic objects in towers of number fields. The unramified Iwasawa modules that are the inverse limits of p-parts of class groups up such a tower are central objects in the study of Iwasawa theory. I will discuss a variety of conjectures and results on the structure of unramified Iwasawa modules, along with applications. In particular, I intend to explain Iwasawa-theoretic refinements of Leopoldt’s reflection principle which form part of joint work with Bleher, Chinburg, Greenberg, Kakde, Pappas, and Taylor.