Coronal structure in solar-like stars

The structure of the solar corona is a very visible reminder of the nature of the Sun's magnetic field. It can be seen easily during an eclipse, and changes dramatically during the solar cycle. It governs the nature of the solar wind and the morphology of the interplanetary magnetic field. On stars other than the Sun, this coronal structure is equally important, but not so easy to observe. Stellar prominences can, however, act as a very useful tracer of the geometry of the coronal magnetic field. These clouds of cool, mainly neutral hydrogen are trapped within the hot coronal gas of many solar-like stars. Rather like the stellar equivalent of iron filings, they trace the magnetic structure of the star's corona. In this talk I will review the recent advances in spectropolarimetry that have allowed us for the first time to map the surface fields of other stars, and the observations and modelling of stellar prominences that have given us insights into the structure of stellar coronae.