Electron-doped cuprates have low values of the upper critical field \( H_{c2} \approx 10 \text{T at } 1.5 \text{ K} \) and hence it is possible to study their normal state at low temperatures. Such studies have been done before and have showed evidence of a “pseudogap”. However, to understand if the origin of this pseudogap is the same as the one observed in hole-doped cuprates and to determine which model of high-\( T_c \) superconductivity it supports, it is necessary to study the effect of high magnetic fields on this pseudogap. We have performed point contact spectroscopy experiments using junctions between a normal metal (Pt-Rh) and electron-doped \( \text{Pr}_{2-x} \text{Ce}_x \text{CuO}_4 \) (PCCO) crystals and films for \( 0.13 < x < 0.17 \). To probe the normal state at low temperatures (\( \sim 1.5 \text{ K} \)), we suppressed the superconductivity by applying high magnetic fields (up to 32 T).

In this talk I will show the effects of such high fields on the pseudogap. I will bring out the difference in behavior of the normal state in the under-, over- and optimally doped regions and discuss our results in the context of present theories viz. preformed pairs and the presence of a quantum critical point. I will also describe the point-contact spectroscopy set-up that we have built to perform these experiments.