In this Thesis, we have characterized and used Microscopic Electrical Mechanical Oscillators (MEMS) in the study of quantum turbulence. Experiments were conducted in the temperature range of 20-920 mK in vacuum in various magnetic fields and in superfluid helium at temperature 20 mK. Resonance properties of MEMS in vacuum showed nonlinear behavior. Low drive peaks showed frequency softening, and high drive peaks showed frequency hardening. We showed that the origin of non-linear behavior lies in the geometry of MEMS. We have shown that our devices are superconductive in field 12.6 mT and is resistive for higher fields. Resonance properties of MEMS do not significantly change with magnetic fields in range 37.8-504 mT. We shown that the motion of MEMS in superfluid helium is highly damped and all measured points were already in turbulent state. MEMS devices can be used to generate quantum turbulence or as its' highly effective local probe.