

- **Objective 1:** Real-time cooperative compensation of unpredictable surgical target motion.
- **Objective 2:** Human-robot dependable cooperation and workspace sharing.
- **Objective 3:** Master slave semiactive architecture providing dynamic virtual constraints into a modeled volatile environment.
- **Objective 4:** Cognitive competences for high level cooperation among robots and human operators.
- **Objective 5:** Augmented sensing and machine intelligence for estimating the target location and for driving robot activity through cognitive estimate of environment and target modifications.